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ARTICLE 1.

MÜLLER ON THE INFLUENZA EPIDEMIC.

THERE has not been time to compare notes on the influenza epidemic now amongst us, but some observations by Dr. Emile Müller (*Gazette Medicale de Strasbourg*, 1890, No. 1) are of interest, especially as to the various *forms* which the malady may assume. The list of names which have been bestowed on this disease is in itself a curiosity, viz.: grippe, influenza, burzal, ganser, erstickungsfieber (suffocation fever), schafkrankheit (sheep illness), hühnerweh (fowl malady), horion, tac, dando, catarrhe epidemique, catarrhe bilieux, galanterie-krankheit, maladie à la mode, fievre à la mode, flussfieber, fievre catarrhale, rhume epidemique, catarrhe Russe, maladie Russe, blitz-catarrhe (lightning cold), épidémie printanière, follette, coquette, petite poste, petit courier, &c. The name of "Russian catarrh" has been given, because Schoenlein and others believed that it always took its rise in the north. Schoenlein says it starts in the plains in which the lakes Ladoga and Ouega lie, and during rapid changes of temperature. The first well established epidemic occurred in 1387; but Hirsch cites one in 1173. In 1709, in Berlin, it took a form in which nervous symptoms decidedly predominated over the respiratory. In 1742, Huxham Pringes gave it the name influenza. In 1743, the great French epidemic took the name of "grippe." All authors agree that influenza is a veritable pandemic, usually proceeding from north-east to south-west, and always extending over a great part of the globe. There have been seven such epidemics since 1800; the last occurred in the winter of 1874-75, when respiratory symptoms predominated.

The present epidemic has shown a marvellous rapidity of extension. After the first few cases in St. Petersburg last October, it developed in the most astonishing manner in the first week in November. The weather at the time was warm, moist, and cloudy, and the wind was west. Within a month *more than half the inhabitants* of St. Petersburg had been attacked. In Berlin, Professor Leyden computed that *more than a third* of the population had suffered by the middle of December. It appears that all classes have been attacked with equal intensity, quite independently of different hygienic conditions under which they live. Neither age nor sex made any difference, though some physicians have thought men more liable than women, and that an advanced age was less obnoxious. Children are not less subject to it than adults. [This is contradicted by some observers.—*Rep.*]

The cause of the epidemic (*see Allgem. Med. Central-Zeitung*) is probably in some connection with the low level of the underground water, which has lasted some time. The disease is apparently miasmatic, the miasma being fugacious in character, and of rapid penetration. Whether *low-lying* neighbourhoods are more affected than higher ones is a question not settled; facts collected in Russia appear to favour an affirmative answer. The question of direct *contagion* is still unsettled also; in numerous families only one member of each was attacked; in other cases it attacked each member successively.

The period of *incubation* is two days, as travellers have arrived. The *prodromic* period is short, lasting only a few hours in some cases; there are lassitude, headache, rigors, &c. The *symptoms* vary, and in this respect cases may be divided into three groups. Common to all three is the appearance of general nervous symptoms, *e.g.*, depression, lassitude, headache, pains in the joints, sometimes vertigo and hyperæsthesiæ. The fever is of short duration. The temperature rises rapidly, often to 104. or 105. F., and either falls as rapidly or remains stationary a day or two and falls slowly. The usual duration is from one to three days, but it may be (rarely) five or six days. The spleen has always been found slightly enlarged. The three forms of epidemic influenza are the purely nervous, the respiratory, and the gastric forms. In the purely nervous form there is no respiratory derangement, nor is the gastro-intestinal mucous membrane affected. But, besides general nervous symptoms, there are severe neuralgic pains which may simulate pleurisy. This form is the most frequent, and the case may strongly resemble the first stage of typhoid fever. In the second form there are bronchial catarrh, coryza, and conjunctivitis, with fever, or rather towards the end of the febrile period. In the gastric form there is catarrh of the digestive tube. Amongst particular symptoms, nasal and labial herpes are very common; palpebral herpes is rare; erythema, roseola and other forms are sometimes seen. Two rare complications are meningeal irritation and catarrhal pneumonia. Besides the well marked cases there is a crowd of slight cases of abortive forms, showing only slight symptoms. Convalescence is usually very rapid. In the medicinal treatment, quinine (or antifebrine, antipyrine, or sodium salicylate) is chiefly employed, together with diaphoretics.

Dr. Graeser (*Berliner klin Wochenschr*, 1889, No. 51) proposes that quinine should be taken as a prophylactic, judging, by its action on malaria, that it would act as a direct antidote to the influenza miasm after its entrance into the body.

E. J. EDWARDES, M.D.

ARTICLE 2.

PROFESSOR LEYDEN ON TABES DORSALIS.

In the concluding portion of a reprint from the Real-Encyclopädie der gesemmten Heilkunde, edited by Professor D. Eulenburg, Dr. Leyden (Geh. med.-Rath, Prof. Director der med. Klinik, Berlin) discusses the prevailing theories of the pathology of Tabes Dorsalis, or "Dorsualis" as he prefers to call it. The following is a summary:

The difficulty begins with the attempt to explain the chief symptom, viz., the muscular incoordination. Most authors agree in connecting this with the lesion of the spinal cord peculiar to this disease, and we may accept this as the cause, though some authors have not been satisfied with it, and Duchenne referred the incoordination to some disease of the cerebellum, though no anatomical changes may be found there. Accepting, then, the change in the postero-external columns as the cause of the ataxia, two questions arise: 1. Does the whole region implicated in the morbid process participate in the ataxia, or only parts of it? 2. What particular function is deranged to cause ataxia? Charcot and Pierret place the essential lesion in the external bands of the posterior columns, and the former considers that the coordinating fibres lie between the internal bundles of the nerve roots. If the process extends to the posterior cornea and nerve roots, anæsthesiæ of high degree arise. Extension to the lateral columns causes motor weakness and paralysis; whereas, if Goll's columns (postero-internal) are involved, no fresh symptoms are caused. Zimmermann argues similarly; but this is only an anatomical distribution of the lesion according to symptoms, and does not help us to explain the ataxy being schismatic and arbitrary. How can a diseased process, *e.g.* of supposed fibres, lying between the internal bundles of the sensory nerves, be considered apart from disease of the latter? The locality of ataxy must depend upon the theory of its essential nature. Existing theories as to the essence of tabes come under three heads. 1. *The first theory* is that of *deranged reflex action* within the spinal cord (Brown Séquard, Cyon.) Against this it may be urged. (*a*) That the cord is not the centre of coordination, and that a disease limited to purely spinal commissure fibres cannot explain it. (*b*) That it is illogical to place the cause of the chief symptom of the disease in an unessential and inconstant lesion, viz., participation of the grey substance, although atrophy of the latter, and derangement of the reflex-paths, may have some share in the peculiar character of the movements, viz. their jerkiness and excess. 2. *The second theory* was first formulated by the author in 1863, and in this the ataxy is regarded as *sensory*. On the basis of experiments by Louget and Claude Bernard, and clinical investigations by Bourdon and Vulpian, the author considers that normal sensibility is necessary for normal coordination, and, conversely, derangement of the former causes ataxia. This theory, warmly received by some, violently attacked by others, cannot yet boast of general acceptance; but the numerous recent clinical studies of the disease lend it further support, in particular the abundant proof of participation of peripheral sensory nerves, and the thoughtful investigation of Goldscheider (On the muscular sense and the theory of ataxy. Virchow's Archiv. XLVII.) Amongst earlier adherents of this theory are Ruchle, Axenfeld, Landry, &c. (more recently may be added Vulpian, also Kahler and Pick) and it is the only one which explains ataxia; moreover, it has so far stood the test of time. Takáes's theory of *delayed sensory conduction* is merely a modification of the above theory. Takáes looks upon the posterior sclerosis as purely secondary, the primary process being atrophy of the hinder roots and cornua, *i.e.* a posterior spinal meningitis. The most constant sensory symptom of tabes is delayed conduction, while anæsthesia and hyperæsthesia may be absent. According to Leyden delayed conduction occurs because the grey substance which conducts painful sensations (Schiff), acts vicariously for the degenerated posterior columns, and takes over the conduction of sensation of touch. Takàes thinks further that this delayed conduction causes motor incoordination, owing to the impulses from the coordination centre, set in action by the sensory nerves being delayed. But Takàes has not shown that delayed sensory conduction is absolutely constant, as it should be for his theory, still less that the grade of ataxia goes, *pari passu*, with the degree of delay in sensory conduction; moreover, he does not show how. This proof, even if obtained, would satisfactorily explain ataxia. Delayed conduction is of more importance in connection with other sensory symptoms than is generally recognised. Another modification of Leyden's theory is Jendrassik's (Deutsche Arch. f. Klin. Med. XLIII. p. 544). He assumes the participation of sensory centres in the central cortex. (3) The *third theory* assumes that *special coordinating fibres* run in the posterior columns, though not yet made out. Accordingly they must run centrifugally, otherwise they would be only a kind of sensory. Todd first gave expression to this view, and Charcot assumes certain coordinating fibres adjoining the "bandelettes externes" of the posterior column, and close to the posterior nerve roots, but says nothing as to the direction in which they are supposed to convey impulses.

N. Friederich, and after him Erb, have taken up this theory. The ataxy is *motor*, says the latter, and from disturbance of the centrifugal paths. There must, then, be special centrifugal coordinating fibres in the spinal cord. Where these lie is yet unknown. The only reason for assuming that these fibres exist is the purely negative one that other theories are unsatisfactory. In another part of his work on the subject, Erb is inclined to place them in Fleching's (lateral) cerebellar tracts, a region of the cord often found quite normal in tabes dorsalis. Fleching calls the "bandelettes externes" and neighbourhood the fundamental band (grundbündel) of the posterior columns, and the fibres here must have a centripetal direction. What ground is there for assuming the existence of fibres running in the opposite direction in this particular and narrow region? The study of ascending degeneration, teaches us that, in the posterior columns only, centripetally conducting fibres run. This theory has no positive facts on its side, while it has positive facts against it, and, after all, it does not explain ataxia.

The arguments in support of the second (the author's) theory are thus marshalled:

1. The morbid process occurs in that part of the cord which represents sensation. There is no doubt about the sensory functions of the posterior nerve roots; and as regards the posterior columns, it can hardly be doubted from their anatomical nature and development, that they are connected with those nerve roots. Van Deen tried to prove their sensibility experimentally, but v. Schiff has made it appear more probable that they (the columns) are themselves insensible. Externally they are in direct connection with the posterior nerve roots, and Goll's columns may be regarded as the centripetal continuation of the nerves' external fibres. It must be granted that experiments on animals by Ludwig and Woroschiloff indicate a more intimate participation of the lateral columns in sensibility than the posterior. Even if this were proved, which is far from being the case, sensory elements in the lateral columns would not necessarily be degenerated in tabes. Kapler's investigations lead him to conclude that the degeneration of the postero—external columns is best explained by the supposition that the disease primarily affects the long ascending paths. The posterior nerve roots are involved in most cases, probably in all, for the best microscopists recognize a difficulty in distinguishing slight grades of atrophy from variations of the normal condition. The root fibres which penetrate the outer zone of the postero-external columns are certainly always affected.

2. The peripheral sensory nerves have been shown to be extensively implicated in tabes (Westphal, Déjérine, Oppenheim). This constitutes a powerful support for the theory. Ataxy has been caused by

peripheral neuritis after acute diseases. Acute ataxy of this form always indicates disease of sensory paths.

3. Sensibility is always affected in tabes (lightning pains, paræsthesiæ, girdle sensation, anæsthesiæ—some or all of these).

4. The integrity of sensibility is necessary for normal coordination, and conversely. Our knowledge here, dating from Bell's time, has been greatly increased by Longet and C. Bernard. The experiments of the latter have been repeated and modified by the author and J. Rosenthal, and the above conclusion is incontestable,

5. The sensory derangements in ataxy are not absolute, but are more or less in relation with its intensity. This statement has been objected to; but it must be remembered that all sensory symptoms are included, not merely cutaneous anæsthesiæ. The sense of pressure, delayed conduction, muscular feeling, etc., when carefully examined, prove the truth of this statement, which is strongly supported by Goldschreider's most interesting investigation on the influence of feeling in the security of movements.

6. Certain symptoms, almost constant in tabes, *e.g.* the inability to stand erect with closed eyes can only be explained on the theory that sensation is necessary for coordination of movements.

Finally, the objections raised against the theory of sensory ataxia are mainly as follows:—

1. Cases of tabes have been recorded in which most careful examination has shown no derangement of sensibility. "It is naturally difficult (says the author) to contradict such observations. I can only say that, after a very large experience, during five and twenty years, I have never seen any such cases." And recorded cases have become rarer as examinations have become more systematic.

2. Experimental ataxy is not the same as tabetic. This is willingly conceded, experiments only prove the influence of sensibility on motility.

3. Extensive anæsthesiæ may occur without ataxia. One-sided cases prove nothing, and hysterical anæsthesia prove but little. Careful examination, moreover, will reveal some incoordination. In Spaeth's often cited case (Britray's zur Lehoe von der tabes dorsualis, 1864), the patient fell down if the eyes were closed. One extraordinary case (Späth; Schäppel—Archiv. der Keilk., 1874, xv.), it is true, presents difficulties, viz., a case of general anæsthesia with good motility and coordination. There was loss of feeling for passing movements, and for the position of the lower limbs. Here a hydromyetus had compressed the posterior colnmns for some distance and partially atrophied them. But both the clinical picture and anatomical changes were different from those seen in tabes. The sensory derangements must not be estimated from the tuctile density alone.

E. J. Edwardes, M.D.

Article 3.

OTTO COHEN (BONN) ON THE FORM OF THE ORBIT IN MYOPIA.*

Stilling, in his monograph, advances the theory that myopia was due to growth under pressure, the pressure being caused by the superior oblique. He pointed out that the muscle has a very varying relation to the globe, in many cases being in contact with a considerable portion of it and by its contraction exercising a certain amount of pressure, while in other cases it is not in contact with the globe till it reaches its insertion, and therefore is incapable of compressing the globe. Stilling believes that the great factor that determines the relation of this muscle to the globe is the height of the orbit, or, more correctly, of the pulley of the superior oblique. The latter cannot be determined, as a rule, on the living subject, but Stilling measured the height of the orbit in a large number of cases, using for the purpose a pair of compasses. He measured both the height and breadth, the number representing the per centage proportion that the height bore to the breadth, called the height-breadth index, *e.g.* the vertical measurement being 30 mm. and the horizontal 32; the orbital index was 93·7 Stilling claimed to have found that the average index was much less in myepic that in hypermetropic or emmetropic eyes. In commenting on this theory we pointed out, the necessary inexactness of the measurements and that considering the ease with which the experimenter might be deceived, it was highly important that these statements should be verified by others.

In the paper before us the writer gives the measurements and the refraction in 334 cases, and also describes 20 cases in which a dissection of the orbit was made, these measurements were made by the writer with Stilling. The measurements on living subjects were made on pupils of the Strasburg Gymnasium, also, as we understand, with Stilling in the lower classes only those who were known to be myopic were measured, as the others were still of such an age that they might develop myopia later. The per centage, therefore, of myopia, which in the whole school was 20%, appears to be more frequent.

(This selection of certain cases only from the lower classes seems to us to be unfair, as it results from it that among the myopes are included a larger per centage of young children than among those who are not myopic. This would be of little consequence if we knew that at the time the measurements were made the orbit had reached such a stage of development that its index might be considered fixed. But the ages of the children are not given. If by these lower classes the author means the 4th, 5th & 6th, 24 cases are included, and the averaged index is 81·5). Among the 134 myopes the orbital-index was between 71·4 and 85·7 is 114; in 4 it was less than this, and in 16 more. Among the 200 other eyes the index varied from 85·2 to 100 in 166; in 3 it was higher than this and in 31 lower.

The author states that out of the sixteen cases of myopia in which the orbital index appeared to be high, ten were only apparent exceptions to the rule, since in these the middle point of the upper margin of the orbit was unusually high above the supraorbital notch. And that had the latter point been taken for the measurement (which is a much better guide to the position of the oblique pulley) the orbital index would have been found to be low. It was not possible, however, to make use of the supraorbital notch in all cases as it frequently cannot be felt. In four of the remaining cases, the eyes weje unusually prominent, a condition in which compression of the globe in the transverse meridian may occur without a low orbit. The other two were cases of progressive myopia, in which the eyes had not been used much for near work.

The orbital indices usually differed slightly on the two sides, and when one eye was myopic while the other had a refraction, the former usually had a lower index. Twenty orbits were examined in the dead subject by the author. The orbital index was first determined as in the living. The roof of the orbit was then chiselled away, the action of the superior oblique observed. The results of each examination are given in full, but may be summarised as follows:—

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* *Archive für Augenhilkunde*, Sept., 1889. *Schädelban and Keiusichtgkeit*, 1888.

In 3 the orbital index was from 85.2 to 85·7; in one of these the compression exercised caused the transverse diameter of the globe to increase, and in the other two, elongation was in an oblique meridian running forwards and outwards. It has been noticed that these indices are stated to mark the boundary between the high and low orbits.

In 4 the index was below 85-low orbits. In all these the superior oblique caused compression which tended to elongate the globe; in one in an antero-posterior direction, and the others in oblique meridians more or less approximating to this.

In the remaining 13 the index was more than 85. In 12 of these the superior oblique, by its contraction, caused either no compression of the globe or tended to elongate the transverse diameter.

In the remaining case although the index was 86·1 the pulley was low—level with the insertion of the muscle—and the muscle caused compression almost in the transverse meridian.

From these facts the author concludes:—

(1) That the form of the orbit influences the course and insertion of the superior oblique muscle.

(2) In low orbits this muscle has such a course and insertion as to cause compression of the eyeball, and consequently

(3) That the form of the orbit influences the development of myopia.

The facts certainly seem sufficient to show that myopia and low orbits are frequently associated, but it is evident that there are numerous exceptions, and that the height of the orbital orifice is not a safe guide to the position of the trochlea.

It is a pity that the writer did not carry his experiments on the cadaver, further, and give the measurements when the soft parts had been removed, in order to enable us to judge to what extent measurements made during life are to be considered reliable.

W. Adams Frost.

Article 4.

ENGLISCH ON IDIOPATHIC PERICYSTITIS.

The *Deutsche medizinal Zeitung* gives the following notice of the work of Dr. Joseph Englisch, first physician in the Rudolf Hospital in Vienna. The cavum praeperitoneale Retzii is the space into which the bladder ascends as it fills. Opinion differs as to the constitution of its wall. Some think that the lower portion of the straight abdominal muscles at the back are without a special covering, and that the ascending bladder comes into immediate contact with the muscles; others assert that this part of the muscle has also a sheath. The latter view is held by Englisch. The diseases of the cavum peritoneale Retzii are chiefly of an inflammatory nature, being either acute or chronic. Englisch classifies them thus:—(1) Idiopathic, when no cause can be assigned, though infection may be *possible*. (2) Traumatic, the result of external injury. (3) Metastatic, after infectious diseases of other organs. (4) Consecutive, being the development of diseases of adjacent organs.

Englisch finds records of only 23 cases of idiopathic inflammation, 18 being cases of males. The age at which this disease mostly occurs seems to lie between eight and thirty. He inclines to the opinion that an existing tuberculous constitution or habit predisposes to inflammation of the cellular tissue in the neighbourhood of the bladder. Any disease of the urinary organs especially predisposes to inflammation. He agrees with Leufser in distinguishing two stages of the disease, viz., general symptoms and the tumour. The symptoms of the first stage are pain, sickness, uneasiness, loss of appetite, vomiting and constipation. The tumour may be observed already on the second day, or only after some months. It develops from below upwards, and may reach the height of the navel. It may be sharply defined or not, and in the former case it may be symmetrical or unsymmetrical with the median line. The symmetrical tumour assumes the shape of the filled bladder, but generally the tumour is unsymmetrical. Bimanual examination best determines the shape. The consistency of the tumour is at first doughy, and later on hard, and when suppuration begins there is partial softening. The surface is lumpy as long as the abdominal wall remains intact. A peculiar feature is that no decrease (or only a very slight one) of the tumour is caused by catheterism. Examination from the rectum is indispensable. The passing of urine is but little interfered with, and may even be normal; in only a few cases in there ischuria. The urine itself is normal, or undergoes little change, at any rate at the commencement of the disease. In every case except one fever set in, generally together with the first symptoms, but sometimes sooner, sometimes later. There may or may not be collapse. The tumour burst in 6 of the 23 cases, became hardened in 2 cases, and showed suppuration in 15 cases. Hardening in the neighbourhood of the ureter causes engorgement of the kidneys. The pus usually discharges outwards, but possibly into the rectum, vagina, urethra, peritoneal cavity, or other places, *e.g.* the front of the thigh.

Idiopathic inflammation of the cavum Retzii may be mistaken for peritonitis, enteralgia, cystitis, local peritonitis, retentio urinae, calculus vesicae, extra uterine pregnancy, neoplasms, adhesion of the bladder and inflammation of the abdominal muscles. Englisch then goes into the differential diagnosis.

The prognosis is favourable; in only 3 cases death occurred through perforation. The treatment is symptomatic: application of cold, later of moist warmth, rubbing with unguentum hydrargyri, unguentum iodatum; in case of suppuration, opening of the tumour, with the incision as in sectio alta; and in spontaneous discharge, proper antiseptic treatment.

Englisch divides traumatic inflammation into two groups, the first of which comprises those affections of the cavum Retzii which occur only through extravasation of blood in consequence of an external injury; the second group comprises the genuine traumatic inflammations of the cellular tissue. Of the first group he has found records of but 5 cases, of the second only 8 cases. In the first group there were 3 deaths, and in the second 1 death.

Of metastatic inflammation only 3 cases were observed, all occurring after typhoid fever. In all 3 cases the symptoms of inflammation of the cellular tissue of the cavum Retzii appeared only in the second period of the fever. One case recovered with suppuration, another without suppuration, and in the third case death occurred through perforation into the abdominal cavity.

Consecutive inflammation is the most common form. It originates in diseases of the urinary organs, of the genital organs, and of the other organs of the wall of the pelvis. The worst cases observed were those which occurred after gonorrhœa. In consecutive inflammation the urinary difficulties are more considerable than in other forms of inflammation. Englisch says: "It seems perfectly allowable to assume that there is some agent that can affect the cellular tissue of the cavum Retzii alone, and produces the circumscribed form of inflammation of the cellular tissue. If the agent affects the bladder, at the same time there occur those complications that are connected with inflammation of the bladder, the degree of which is determined by the extent to which the mucous membrane of the bladder is affected. Of what nature this agent is cannot be determined as yet, but the process agrees with that observed in other infectious diseases. We have, therefore, to deal here with an infectious disease, as Leufser has already indicated." In conclusion Englisch gives 11 cases out of his own practice, and tables of the other cases recorded in the literature of the subject.

JOHN ELLIOTT.

ARTICLE 5.

EISENLOHR ON THE PATHOLOGY OF SYPHILITIC DISEASE OF THE POSTERIOR COLUMNS OF THE SPINAL CORD.*

DR. C. EISENLOHR (Hamburg) reports two cases of syphilitic disease of the spinal cord, of tabetic character. The symptoms were not the classical symptoms of tabes, but afforded so many analogies therewith, that the term "anomalous tabes" might well seem justified, and the *post mortem* appearances acquired importance as regards the pathological distinction. In both cases there was chronic spinal meningitis, undoubtedly of syphilitic origin, together with secondary changes in the cord, chiefly in the posterior columns, but also to some extent in the posterior nerve-roots.

Case I.—Merchant, ætat 59; had syphilis 27 years ago, in 1850, and was treated for the same No history of "secondaries." In 1860 white patches in mouth; in 1868 spinal symptoms first set in, viz., paræsthesiæ in hands. Then followed lancinating pains in both legs, which left him after about eight years. In 1882 pains in arms, and slight difficulty in writing, also giddiness and tremors, which were ascribed to alcohol, and ceased on abstinence therefrom. Sudden double vision, from paresis of the right *n. abducens*; then occurred also diminished visual acuteness, commencing atrophy of the r. optic nerve. Right pupil reacted to light somewhat slower than the left. Standing on one foot impossible. Giddiness on standing with eyes closed. Patellar reflex now failed on both sides. Impotence 10 years already. In 1883, improvement; knee-jerks again present. In 1885 severe neuralgia of sciatic, with unsteadiness in joint. In 1887 numbness and feeling of cold in feet and ankles, suddenly constipation and difficulty in emptying bladder. Motor weakness in both legs; then gastric symptoms set in, and a hard tumour appeared in the epigastrium. On March 12, 1887, Dr. Eisenlohr saw the patient. There was distinct incoordination of movements, uncertain joint sensibility to pain much lowered; patellar reflex on both sides obtained with difficulty. Inunction ordered. Soon a high degree of paresis appeared in the hips and knees, while the foot movements were still good. Occasional lightning pains. On the 15th the patellar reflexes were quite lost. In the beginning of April the motility improved, but the sensibility remained lowered. The gastric symptoms now became prominent, and death occurred on April 24. The *autopsy* showed the following:—Cancer of stomach and neighbouring organs; pia cerebri thickened and slightly opaque; disseminated whitish patches on large central arteries; brain normal.

Pia spinalis, thickened and clouded, posteriorly only, all along the cord. This thickening took the character of a gummatous nodule in two places, viz., at the upper part of the dorsal region, and at the level of the eighth dorsal vertebra. The microscope showed that in the latter place the little tumour had penetrated into the posterior periphery of the spinal cord, and had involved the posterior root on the right side; moreover, the whole area of the posterior columns had here degenerated, with the exception of a narrow strip behind the posterior commissure, extending each side along the posterior cornua. The degeneration was not confined exclusively to the posterior columns, but extended slightly on the right side more than on the left, across the posterior nerve-roots, into the lateral columns. This degeneration was of only a few millimetres in vertical extent. The posterior cornua were slightly implicated posteriorly; the cells of Clark's columns were unaltered. In the cervical part of the cord no pronounced changes were found, but the neuroplia was somewhat thickened. The medulla oblongata (including the roots of the acoustic n.) was normal. There was sheath-thickening of both optic nerves beyond the chiasma, and on their median aspects, extending slightly into the nerve-substance.

Case II.—Brewer's man, ætat. 42. First attended in 1886. Syphilis in 1866, with "secondaries," inunction; cure. Fresh infection in 1870. Phagedenic chancre; no secondary symptoms; inunction again. Of late years neuralgia in various parts, quickly coming and going; numbness, chiefly in the hands, and, lastly. unsteadiness of the latter, with incapacity for fine work. No headache, no double vision. Alcoholic excess admitted by patient. On examination, the skin feeling was found very much lowered in both hands, especially as regards form, smoothness, and size of objects; cold and warmth were better distinguished. Painful impressions, hardly felt in hands. Triceps-reflex, and that of forearm, lost on both sides. Use of hands much restricted, writing was impossible. Sensibility to touch and pain lowered in trunk, decidedly so in feet. Motility of latter normal; also plantar reflexes. Patellar reflex present on both sides. The treatment (1886) was anti-syphilitic, later on also hydrotherapy, but the patient did not improve. In September, the pupils were wide, equal, and acted very slowly to light. After some months he got weak, both bodily and mentally, and there was difficulty in urination, with catarrh of the bladder. The mental torpor and general weakness increased as disease of the legs appeared, and the patient died early in 1887. *Autopsy.* Central pia opaque, over frontal lobes, and here and there at the base. Arteries of brain normal; also brain itself. In the spinal cord, degeneration evident to the naked eye in posterior columns in cervical and upper dorsal regions. Under the microscope, after hardening, the degeneration was found to occupy the middle part of each posterior column on each side, from the periphery nearly to the posterior commissure; behind which the strips of degeneration coalesced. The part on each side adjoining the posterior fissures (corresponding to the middle third of Goll's column) was intact, also the more external portion of each posterior column (next to the posterior nerve-roots and posterior cornua). The right anterior column shewed a sharply marked field of degeneration reaching to the anterior cornu, on the left side the degeneration of this region was only peripheral. The pia mater was united with the cord in places, and thickened; of the cornua, a portion of the right one shared in the degeneration. The above described alterations were found all along the cervical portion, gradually ceasing only in the higher part of the medulla oblongata, they reached downwards only to the upper dorsal part of the cord. But the pia mater thickening extended, more or less, the whole length. *Comment.* Both cases were examples of syphilitic disease of the spinal cord. In the first there was both diffuse infiltration, and circumscribed new formations; in the second, the former only; but in both cases the starting point was chronic spinal meningitis. The posterior columns were the parts mainly affected. The extraordinarily protracted course of the first case (20 years) shewed only sensory derangements, and peripheral pains, up to the advent of paraplegic symptoms; this shewed posterior (chronic) spinal meningitis, with irritation of the nerve roots. The absence of a compact degeneration of Goll's columns was puzzling. The second case more nearly resembled tabes dorsalis anatomically, and, to some extent, clinically; but in distinction must be remarked the implication of the "posterior outer fields," the somewhat different configuration of the affected parts in the (posterior) columns, and the sharply defined difference between sound and diseased portions. Both cases afford many analogies with tabes. Unfortunately, the peripheral nerves were not examined, so that nothing can be said as to a peripheral neuritis. In both cases we have to do with a specific chronic meningitis, changes in the spinal cord almost entirely confined to the posterior columns, and a clinical course much resembling tabes. They do not help us to decide for or against the syphilitic origin of tabes dorsalis in general, but they illustrate the fact that syphilitic types of diseases very similar to tabes may appear under very different anatomical alterations, although the latter may be similarly localized. Fournier and others say that syphilitic and non-syphilitic tabes have no characteristic differences, hence the importance of recording any deviations from the usual type.

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* *Festchrift zur Eroffnung des nuen Allgem. Krankenhaus zur Hamburg*, 1889.

E. J. Edwardes, M.D.

Article 6.

NONNE ON THE PATHOLOGY OF ABSENCE OF KNEE-JERK.*

Westphal located the cause of defective patellar reflex in disease of the (posterior) root-entrance zones of the spinal cord. He had already done this, when he was confirmed in his views by a case of one-sided knee-jerk, in which also the only *post mortem* alteration found was one-sided alteration of the region mentioned. The only case of this kind since then, so far as is known to the author, is given by Minor, of St. Petersburg (Neurolog. Central, pl. 1887, No. 10), and the author now publishes a similar case. A workman, ætat 36 had syphilis in 1872; no general treatment. Disease of nasal bones and sinking of bridge of nose a year ago; progressive weakness; hoarseness. No pains or paræsthesiæ in limbs, nor girdle-pains, nor visual disturbances. The patellar reflex is obtained on the left side without difficulty, but on the right a very feeble contraction of the quadriceps femoris is only obtained by heavily striking the patellar tendon, and this not always. No ataxy. The man was not a drinker. Iodide of protassium was given and the pharynx and larynx improved, but the lung disease rapidly advanced. Careful search was made for any derangement of sensibility, but none was found. The patient died of phthisis 2½ months after admission. The left knee-jerk gradually failed before death; it could not be obtained with certainty a week before, but was totally lost on the right side a month before death.

The *autopsy* showed a normal condition of the motor nerves to the various muscles of the thigh. In the spinal cord a small triangular patch of degeneration was found projecting on each side from the posterior horn towards the median line, all other parts were normal. This was in the sacral portions; in the lumbar region the patches were larger. They exceeded Westphal's region a little, and the right patch was larger than the left. Thus the zones of entrance of the posterior nerve-roots were the only parts affected, and the reflex arc was only interrupted in one place, viz., in the spinal cord. There was no trace of chronic inflammation of the pia mater; the affection bore the character of a primary degeneration; the vessels were not altered, and the posterior nerve-roots were intact, and so also were the posterior coruna. One might be tempted, says the author, to call the lesion specific, but the cases collected by Rumpf (Die Syphilitischen Erkrmuckungen des Nyromaysterns, Wiesbaden, 1887), are insufficient to establish this. It was more probably incipient tabes dorsalis, but due to specific disease, and it confirms Westphal's theory of the localization of the nervous lesion in deficient knee-jerk.

A second case is also instructive. A workman, aged 65, had drunk freely—variola 14 years ago, stiffness in right hip from an accident 12 years ago, otherwise healthy. Had a hard chancre 40 years ago, treated by inunction; no late syphilitic symptoms. Married many years ago; has several healthy children; wife has never miscarried. Eight days before admission complained of weariness, anorexia, and diarrhœa. The respiration was quickened, the hands and tongue tremulous, temperature subnormal, pulse weak, irregular. Severe bronchitis. Right knee-jerk normal, left not to be obtained even by Jendrassik's method. No ataxy; no sensory disturbance, as far as could be made out from the patient's condition. Pupils and eye-movements normal. The patient died two days afterwards. At the autopsy various motor twigs of the nervus cruralis showed nothing abnormal. The spinal cord showed a commencing myelitis extending its whole length. In the upper part of the cord the myelitis was found to be in an incipient condition in the posterior, and slightly in the lateral columns, but in the lumbar region it was found on one side only—the left—and limited to the uppermost part of Westphal's area of entrance of the nerve-roots. The process was evidently acute. There were found swelling of medullary fibres and air cylinders, scattered granular cells, destruction of some nerve fibres, and slight increase of intestinal tissue. The root-fibres were seen to be most atrophied on entering this patch, in contrast to the healthy fibres on the opposite side. The reflex arc was thus interrupted as before in the spinal cord, and the disease in this was evidently not purely tabetic. The reflex arc may also be interrupted by peripheral nerve diseases, and by chronic and acute muscular affections (acute polymyositis, trichinosis).

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* *Festchrift zur Eroffnung des nuen Allgem. Krankenhaus zur Hamburg*, 1889.

In five further cases reported by the author (*ibid.*), the only symptom referrible to the nervous system was absence of knee-jerk, but this was due, in all five cases, to parenchymatous degeneration of peripheral nerves—the term "inflammation" is misleading. Four of the patients were drinkers (one also phthisical), the fifth had typhoid fever. As a central observation, the motor twigs and the quadriceps femoris were examined in three drinkers who died of delirium tremens, but in whom the knee-jerks were never lost; nothing abnormal was found. There was no history of syphilis in any of the above five cases. The peripheral, not spinal, genesis of Westphal's symptom in acute diseases is now generally conceded, especially since experiments have shown how slight an alteration of the crural nerve will cause it.

ARTICLE 7.

SAENGER ON A CASE OF CORTICAL HEMIANOPSIA.*

NOTHNAGEL, in his classical address in 1887, on the localization of cerebral diseases, brings forward with assurance the theory that persisting cortical hemianopsia is due to lesion of the cortex of the occipital lobe. On the basis of five cases recorded by Haab, Huguenin, Feré, Seguin and Curschmann, he places the optical perceptive centre in the angular gyrus and first occipital convolution, because, in the above-mentioned cases, the only lesion found, *post mortem*, was a narrowly circumscribed lesion of the cuneus. Since then three more cases have been recorded, viz., by Schmidt, Rimpler, Hun and Henschen. The present case confirms the theory. It occurred in Prof. Kasts' ward and Dr. Eisenlohr assisted the author. A man, aged 46, was admitted into hospital, October, 1888, suffering from severe cough and dyspnœa, with profuse expectoration; had a chancre 26 years before, but no secondary symptoms were remembered. Advanced tuberculosis was diagnosed. On the twelfth day of treatment, he had violent headache, and such darkening of the field of vision that he said he could not see well. He counted five fingers as three. Förster's perimeter showed homonymous lateral left-sided hemianopsia, both for white and for colours. Central acinty 20/20 right, 20/30 left. Slight hypermetropia. Pupils slightly contracted, equal, reacting well to light and convergence, not so well on accommodation. Hemiopic pupillary reaction not made out. The ophthalmoscopic appearances were normal. The light perception was apparently not affected, but no photometer was at hand. The patient lived only three months, the above symptoms persisting. Obstinate diarrhœa came on, and when the patient was moribund, right facial paralysis and lagophthalmus, with contracted pupils, appeared. There had been a slight degreee of stupidity noticed for some time, with delayed perceptivity, drawling speech and indifference to what was going on around. He died comatose. The autopsy showed, as the only central lesion—no syphiltic lesions were found anywhere—a sinking of the inner surface of the right occipital lobe, with opacity of pia over it. A frontal section showed no softening in the precuneus; a sagittal section at the top of the occipital lobe showed yellow softening of cortex corresponding to the basis of the angular gyrus. It was about 3 cm. ant. post., but was only a few millimetres in depth. The pia was firmly adherent in this place, between cuneus and precuneus. A fresh thrombotic closure of the basilar artery was found; also in the third part of the right lenticular nucleus, an irregular cavity, a few millimetres in diameter. Externally this was bordered by the external fibres of the internal capsule. The *microscope* showed a small conical area of degeneration, the anterior limit of which was parallel with the occipito-parietal fissure, and about 8 mm. behind it. Backwards it reached to a centimètre distance from the apex of the occipital lobe. Its basis was the sunken median surface of the angular. Normal vessels and nerve fibres were found only a short distance from it, and only a few granular cells were found to indicate anything abnormal in its immediate neighbourhood. But enormous quantities of such cells were found in the medullary substance near the junction of the occipital lobe, with the cerebellum arranged partly around the vessels, partly in separate masses.

Although the pathological process went beyond the limits of the small area of softening, the author has no hesitation in ranking this case amongst those which support Nothnagel. The ocular symptoms were repeatedly examined during life with the greatest care, and were constant from the time of their first appearance.

ARTICLE 8.

DR. RICHARD ULRICH (STRASSBURG) ON THE TREATMENT OF DETACHMENT OF THE RETINA.*

THE author commences by pointing out the unsatisfactory results of all measures hitherto employed, pressure, the injection of pilocarpine, puncture, etc, have all occasionally been followed by improvement, but none have stood the test of an extended trial. The result has been that we have come to look upon detachment of the retina, for all practical purposes, as an incurable condition. In taking this view the author thinks that we have lost sight of the pathology of the affection, and have forgotten that we are dealing with a condition that is extremely chronic, and which, therefore, requires very prolonged treatment.

In most cases the retina is detached, according to the author, as the result of choroiditis. If the retina were in contact with the choroid in a late stage of the disease the two membranes might adhere in places; but when a case of detachment comes under observation, if either spontaneously, or as the result of treatment, the retina becomes replaced, the patient is very soon allowed to leave his bed and to go about his work, with the result that the detachment almost invariably recurs.

Although the material for studying the microscopical pathology of recent cases is necessarily very scanty, there is no doubt that the cause in most cases is an exudative choroiditis. An exudation similar to that between which takes place between the retina and choroid, also occurs in the adjacent part of the vitreous. The exuded fluid, being heavier than the vitreous, tends to sink, and this downward tendency, together with the movements of the eye, constitute a force which causes the upper part of the retina to become detached.

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* *Festchrift zur Eroffnung des nuen Allgem. Krankenhaus zur Hamburg*, 1889.

* *Klin. Monatsbl. fur Augenheilkunde*, 1889.

Chronic choroiditis does not recover in from four to six weeks, and it is, therefore, unreasonable to expect to cure a detachment resulting from it in that time. The patient must be kept under observation for a very long time, and it is, of course, of the utmost importance that it should be taken in hand early before degenerative changes have occurred in the detached retina; but although the retina may become replaced even in such cases, no benefit will accrue to the patient.

The writer would, therefore, attribute more importance than is usually done to what he considers premonitory symptoms. We do not gather, however, from his description that these are anything more definite than an increase in the muscular volitantes from which myopes commonly suffer.

The author takes rather a different view from that usually held of the connection between the rupture of the retina and the detachment, it is usually considered that it is the rupture that permits the detachment to occur, and in this sense may be considered as its cause; he, however, looks upon the rupture as being caused by the pressure of the sub-retinal fluid. When a detached retina has become replaced and a relapse occurs, he believes that the fluid escapes, by following its original course between the retina and choroid, escaping into the vitreous through the rupture, which may therefore be looked upon as a safety-valve. It is usually held that a detachment occurs suddenly, owing to the fact that the patient usually states that the defect in the field occurred suddenly. But from the account given by a very intelligent patient, who was under observation a year and had several relapses, the author does not believe that this is the case. The loss of the field does not coincide in point of time with the occurrence of the detachment, but comes on about 24 hours later.

In a recent detachment the immediate object of the treatment should be to get rid of the sub-retinal fluid, in some cases the attempt is successful, in most it is only partially so. Efforts in this direction should be discontinued when it seems unlikely that further effect will be produced. For this purpose the writer recommends that the patient should be confined to bed, and should take large doses of salicylate of soda (a drachm daily, missing every third day). He considers that this not merely acts as a sudorific, but that it has a specific action on affections of the uveal tract. Next in importance he places the pressure-bandage, a simple flannel roller, which is always put on before the patient rises from the recumbent posture.

As detachment usually occurs first above, the fluid must sooner or later gravitate, unless absorption can be brought about in the earliest stage. The surgeon should aim at allowing this change to take place gradually, so as to do as little mischief as possible. The patient must remain in bed until as much absorption has occurred as seems likely to be produced. He may be allowed to get up, but his vision and field must be regularly examined. The descent of the fluid may be traced by the march of the defect in the field, and its rapidity can be controlled by keeping the patient recumbent for a day or two at a time at intervals, with or without the bandage. At the same time the subsidence of the detachment above should be visible with the ophthalmoscope. The case then enters upon the fourth stage, that of the secondary detachment. For this the measures are repeated that were employed at first to procure absorption.

Among subjective symptoms which indicate changes in the level of the detachment, the author attaches much importance to changes in the refraction; these changes are, of course, for the most part transitory, and due to the retina shifting its position, but in one of the cases, in which there had been high myopia, a permanent diminution in its amount seemed to occur, although the retina had become replaced. It would seem, therefore, that in this case some change in the form of the sclerotic must have taken place. According to the author, a certain amount of choroiditis is necessary for the cure of a detachment, in order to cause the retina to adhere to the choroid. Simple removal of the fluid will be followed by recurrence, just a simple tapping of a hydrocele.

We have not attempted to make an abstract of this paper, which is a very long one, but merely to give our readers an outline of the author's views.

W. Adams Frost.

Article 9.

THE HYDERABAD CHLOROFORM COMMISSION.

The whole civilized world owes a debt of gratitude to his Highness the Nizam of Hyderabad for his openhandedness and public spirit in connection with the Chloroform Commissions which have been held at his instigation. It is, to say the least, remarkable, that an Eastern potentate should have, upon two occasions, excited so much interest in a point of medical science. His lavish generosity in the matter cannot be better described than as an example of the highest form of philanthropy. The main facts of how the Commission was formed, and how Dr. Lauder Brunton was selected by the *Lancet* to proceed to India to take part in the inquiry have been freely discussed in the medical journals and are now almost matters of history. The result of much patient work, and involving a large series of experiments upon dogs has just been made public in our contemporary, forming the report of the Commission above alluded to. The conclusions therein contained will probably in the opinion of most judges, require practical and further confirmation before they can be generally accepted. It has, of course, been usual to believe that the fatal effects from the administration of chloroform were due to the paralyzing action of the drug upon the heart. So much practical evidence seemed to point to the correctness of this view that the heart has always been held to be the weakest link in the organic chain when the anæsthetic has been used—and, even now, in the face of what the report of the Commission contains, it seems difficult to believe the contrary. Patients have suddenly died upon the operating table, within a few moments of the administration of chloroform, and, after death, a fatty heart has been found. To suppose that asphyxia has been the cause of death in these cases does not seem to be reasonable, nor does it accord with the facts. We have noticed patients in the course of a small operation, while under the influence of chloroform, who have suddenl ybecome blanched and the face has become bedewed with moisture. This, we take it, can only be due to cardiac failure, dependent upon the administration of the drug. We believe it to be the case, moreover, that no evidences of asphyxia have even been present in cases of death from chloroform in the human subject. Still, whatever the common experience may be in this regard, it may yet be the case that the physiological effect of chloroform is to cause death by asphyxia. This is, indeed, the cardinal point upon which much stress is laid by the Commission. It is stated that in the experiments belonging to the first series of researches, the chloroform was given, under the most varying conditions, in health and disease before and after the ingestion of food, and alone and in combination with morphine, atropine, and strychnine, but however administered, the result was invariably the same, viz., that the respiration ceased before the heart had stopped beating. This testimony, one is compelled to admit, appears to be incontrovertible, and undoubtedly carries conviction with it to the mind of the observer. But, as far as we know, it has not been pointed out that experiments were made upon dogs, who, under the circumstances in question, might be excellent for the purpose of illustrating the normal physiological effects of chloroform, but scarcely adapted for showing the effects of the drug as met with in fatal cases in the human subject. It is, for example, indisputable that in many persons the dread of taking an anæsthetic often surpasses that of the operation itself. The mental perturbation associated with the operation begins with and is mainly centred in, the act of being rendered insensible. The first incision of the knife was always the most trying to patients before anæsthetics were discovered. Whatever, in other words, a patient thinks he will have to "feel" first, that is precisely the thing about which he is naturally calculated to conjure up the greatest degree of repugnance and disturbing thought. And no doubt in many cases this condition of things detracts very largely from the general suitability of patients upon whom operations are necessary. In short, in some cases, it is quite possible that some degree of shock may be present before the administration of the anæsthetic is commenced. Any such condition as this, however, would not be possible in a dog. We cannot conceive of a dog having any psychological disturbance preparatory to being put under chloroform, even were the animal in a diseased state. Hence, upon these grounds, it seems to us that the report of the Commission leaves matters very much as they were before, so far, indeed, as the fatal cases of chloroform administration in the human subject are concerned. The worst feature of these cases is, that the administrator has seldom any warning of the impending catastrophe; long before he has any opportunity of rendering assistance to his patient, the end has come. We cannot say that we feel very sanguine that the able report presented by the Commission will have the effect of reducing the mortality from chloroform administration. To a healthy, robust person chloroform is probably as safe as any other anæsthetic, but we feel disposed to think that there will always be a certain proportion of persons to whom the drug would always be dangerous.

Surgery.

RECENT PAPERS.

10. **Vandenabeele**, Dr. — On the Influence of Coughing in the Reduction of Hernias. (*Gazette Med. de Strasbourg*, 1890, No. 1)

11. **Landerer**, Dr. A. (Leipzig).—The Treatment of Painful Flat-foot by Massage.

12. **Beach**, H. H. A., M.D.—Old Dislocations of the Humerus. (*Boston Med. and Surg. Reporter*, p. 32, Jan. 9, 1890.)

13. **Mears**, Dr. J. Ewing.—On a case of Stab-wound involving the Pericardium, Diaphragm, and Stomach. (*Med. News*, Jan. 4, 1890.)

14. **Huntington**, Dr.—On a case of Compound Comminuted Fracture treated by Wiring. (*Occid. Med. Times*, Jan. 1890.)

15. **Morton**, T. S. K., M.D.—Abdominal Section for Gunshot Wounds and Stab Wounds. (*Journ. Amer. Med. Assoc.*: January 4th, 1890.)

16. **Guyon**, Prof.—On the Non-operative Treatment of Anal Fistula. (*Bull. Med.*, 29 December, 1889.)

Art. 10. *Vandenabeele on the Influence of Coughing in the Reduction of Hernias.*—Case I. The author was called to see a man with left inguinal hernia. Had pulmonary emphysema for years; the severe coughing had caused the hernia, which at last became strangulated. It was of the size of a small orange, and after applying taxis for twenty minutes no result was obtained. Suddenly, in spite of interdiction, the man coughed violently, but the hernia was not released from pressure; a gurgling was heard meanwhile, and the sac was half emptied. After a minute's rest the hernia was again seized, and the man was directed to cough. It was reduced at once. He began to suspect that the act of coughing caused dilatation of the inguinal ring, and awaited another case.

Case II. Some months afterwards he was called to a woman with left femoral hernia, and found Dr. Cohen there. The hernia was the size of a large nut, and taxis had been tried half-an-hour. His *confrère* advised sending her to hospital, but he requested a trial. Two minutes taxis gave no result, after which he said: "Now for my method," and, holding the hernia firmly, asked the patient to cough strongly. A gurgling noise was heard at once, and the hernia was reduced, to the astonishment of his *confrère*.

Case III. A short time afterwards he was called to a concierge, who had just been visited by a *confrère*, on account of strangulated inguinal hernia. After taxis by the latter for half an hour transport to the hospital had been advised. After taxis for a short time, which gave no resul, the adopted the above method, and the hernia was instantly reduced.

During five years he has in this way reduced four crural hernias in women, and seven inguinal hernias in men, besides the three cases mentioned. One patient only has been sent to hospital—an old man of eighty years, who could not cough. He concludes that both the inguinal and crural rings are temporarily dilated by the act of coughing, and if pressure be made at the same time, the compressed gases escape into the abdominal intestine. He believes he has discovered an easy method of reducing hernias, superior to any method hitherto suggested.

Art. 11. *Landerer, Dr. A.* (*Leipsig*). *The Treatment of Painful Flat-foot by Massage.*—The explanation of this condition is still doubtful, and the treatment far from satisfactory. Most surgeons apply plaster-bandages; but the author has promptly cured all the cases he has met with during the last year or two (eight cases) by massage. He reasons on the ground that the participation of the muscles is requisite to the development and preservation of the proper form throughout the body, although he would by no means place the cause of all distortions in defective musculature. In flat-foot all muscles connected with the maintenance of the arch of the foot should be strengthened, viz., the tibialis posticus and the triceps suræ, with the short muscles of the foot-sole. These muscles are, therefore, slapped, kneaded, and stroked to the requisite degree. Painful joints are handled lightly at first.

Case I., man, ætat, 19. Troubled with painful flat-foot 6 years. Has worn flat-foot shoes (with spring) plaster-bandages, &c. Extirpation of painful head of fourth os. Amputation advised by one surgeon. Several painful points. Improvement by massage in a week; cure in two months. Patient could dance, walk for hours, &c. Under author's observation seven years. Form of foot altered rapidly under treatment, an arch developing to a certain degree. The other cases were somewhat similar (see original) one was cured in four, and one in three weeks.

E. J. Edwardes, M.D.

Art. 12. *Beach on Old Dislocations of the Humerus.*—This paper contains the brief notes of 7 cases, and the account of the procedures adopted by the author in the treatment of old dislocations of the humerus. The duration of the lesions in the various cases was as follows:—In one case the luxation had existed for six months, another for three months; in two for two months, in one for seven weeks, in two for six weeks. The manipulations employed were such as would loosen and rupture the adhesions with the least danger to the integrity of the shaft of the humerus, always considering the complication of a fractured humerus or socket occurring at the same time as the dislocation. Flexion of the fore-arm upon the arm and careful rotation in every direction in which adhesions can be felt through the impediment they make to any rotation, offers the best and shortest road to reduction. This was done systematically until a reasonable degree of loose capsule had been regained before any attempt to replace the head of the bone was made, then, the usual extension and flexion, combined with rotation, was succesful. To protect the elbow-joint from unnecessary strain during reduction, unless the patient is strong and vigorous, it is prudent to bandage the arm and fore-arm to a well-padded anterior or posterior in elbow-splint. In consequence of muscular atrophy, it is not impossible that the head of the humerus should not be retained well in position after reduction. This need not occasion disappointment, for by the use of the velpean bandage, to maintain a correct position during the inflammation of the joint that naturally follows prolonged attempts at reduction, and the after employment of gentle, passive motion with one hand over the deltoid region, to maintain reduction and electricity, the best results may be obtained. The author uses the rubber ice bag, protecting the skin with flannel, to counteract the joint inflammation following the reduction.

H. Percy Dunn.

Art. 13. *Mears on a case of Stab-wound of the Thorax, involving the Pericardium, Diaphragm, and Stomach.*—On the evening of August 10, 1889, while the patient and his brother were engaged in an altercation, the latter threw at him an open penknife. The blade struck the patient upon the chest from above downward, penetrating the intercostal space between the sixth and seventh ribs and passed inward, downward, and backward, and was buried in the tissues up to the handle. It remained thus until the patient removed it some minutes later. But for some slight pain at the time of injury and some temporary respiratory embarrassment, he experienced no symptoms of any moment. After the removal of the knife he went home, and the wound was dressed with isinglass plaster, That night he slept fairly well, but the next morning, noticing a protrusion from the wound, he was taken to St. Agnes' Hospital. On examination at the hospital by Dr. Vincent, resident physician, a small piece of omentum, about one and a half inches long and three-fourths of an inch wide, protruded from the wound. The omentum, presented no signs of strangulation. The patient complained of no pain, but there was some difficulty in respiration. A probe was introduced into the wound, and its direction noted to be downward, backward and inward. The protruding omentum and surrounding tissues were washed with bichloride solution 1 : 2000, and a dry bichloride dressing applied. On the following day Dr. Mears reduced the omental hernia and closed the wound with two deep sutures of carbolized silk and dressed it with dry bichloride gauze (I : 1000). During the operation no pain of any moment was noted; upon its completion the patient was ordered morphine ¼ grain at 6 p. m., and three ounces of milk every four hours. 12th. Patient felt very well, and there was but slight increase of the pulse rate; no pain and no fever. Passed a fairly good day, and about midnight had a stool. After passing through a very critical period, the patient gradually rallied and was able to leave the hospital well at the end of a month.

Art. 14. *Huntington on a case of Compound Comminuted Fracture treated by Wiring.*—M. M——, laborer; aged 49 years, was admitted to the Railroad Hospital, at Sacramento (Cal), June 22, 1889. While loading rails on a flat car in the Sacramento yards, one of them rolled from the car and struck his right leg, resulting in a compound comminuted fracture of both tibia and fibula, at the junction of the lower and middle thirds, the tibia protruding one inch and a half from the wound. Under ether the fracture was reduced, and several pieces of crushed bone were removed. In order to bring the ends together, so as to secure good union, it was necessary to enlarge the opening made by the bone. The ends of the bone were approximated, and the fragments maintained in position with heavy silver wire. The fracture was oblique. There was considerable hemorrhage, which proceeded from the ends of the bone rather than from any wounded vessel. After thorough irrigation, the external wound was closed by silver wire sutures, a drainage tube inserted, and antiseptic dressings applied. The limb was placed on a posterior wire splint, with splints of binder's board at either side. Patient was put to bed, and at 6 p.m. was resting well—pulse, 76; temperature, 99.8° F. June 23rd—wound dressed; bone found slightly displaced, which necessitated reapproximation. Leg put in a "railroad" cradle. From this date the fibula united rapidly, and there was union at the point of fracture August 20th. At this time the wire uniting the ends of the tibia was removed, and the foot encased in a plaster bandage. September 16th—Cast removed and bone found firmly united. The case was of interest from the fact that the ends of the tibia were crushed, and only small points of the fractured ends of the tibia were crushed, and only small points of the fractured ends of the bone were approximated. Union did not take place until after the fibula had united, the suture serving to prevent the ends of the tibia from slipping past each other. No counter extension was necessary, and no shortening can now be detected.

ART. 15. *Morton on Abdominal Section for Gunshot Wounds and Stabs.*—In the course of a paper read before the American Medical Association on "Abdominal Section for Fraumatism," Dr. Morton publishes 110 cases of section for perforating gunshot wounds, with 36 recoveries. Four times the abdomen was laid open after penetration of the peritoneum had been proved, and no visceral wounds were discovered; all of these recovered. Eight times intestinal perforations were overlooked at the time of operation and subsequently found *post-mortem.* Thirty-one cases died of peritonitis, 14 of shock and prolonged operation, 14 of primary and 4 of secondary hæmmorhage. Wounds of the liver occurred in 15 cases, of these 9 died. Once the liver was extensively sutured, and with success; in 12 cases no special treatment was directed to the liver wound, 5 recovered; twice the wound was packed with gauze, both patients dying, In 5 cases the kidney was perforated, nephrectomy was performed in 3, once successfully, the 2 that were left alone died promptly. In one case the spleen was traversed and was treated with the actual cautery; the patient died from primary hæmorrhage. Excision of the intestine was done 13 times in 11 patients, but without success. Seventy-nine cases of stab wound are recorded, with 48 recoveries. The chief causes of death were peritonitis, 7; overlooked wounds, 5; shock and prolonged operation, 2; primary hæmorrhage, 7; secondary hæmorrhage, 1. Eighteen cases were operated upon and no peritoneal injury found, 2 of these died; wounds of the liver occurred in 9 instances, in 4 catgut sutures were used, with 2 recoveries; it was cauterised in 1 case and packed with catgut in another, both cases proving fatal, and once it was successfully packed with gauze. Once intussusception was found when no visceral injuries were present.

ART 16. *Guyon on the Non-operative Treatment of Anal Fistula.*—The author urges that fistulæ which do not give rise to distressing symptoms ought not to be operated upon. The non-operative treatment consists in rendering the stools soft and regular, and in insisting upon scrupulous cleanliness. The constitutional treatment consists in the administration of iron associated with the bromides, and he recommends the following formula: ℞ potassii bromid, 10 grammes; fer ammon. cit., 50 centigrammes; syr. aurant, 100 grammes—a tablespoonful twice a-day. After each motion one of the following suppositaries should be introduced into the rectum: ℞ iodoform, 10 centigrammes; ext. bellad., 2 centigrammes; ol theobrom., 9 scruples.

ART. 17. *Lee & Murphy on the Early Surgical Treatment of Perityphlitis.*—In a paper read by the authors before the Chicago Medical Society, Dr. Murphy said that as it is impossible to make experiments on the vermiform appendix in the lower animals, it being present only in the ourang-outang and a species of bat, our knowledge of its physiology and pathology must depend on observations made upon it in man. Its absence in such a large number of omnivorous animals would lead to the belief that it has no influence on digestion. Notwithstanding our inability to attribute to it any special function, we still see the evil effects produced by its diseases. From its form, its valve, its position, and the different mechanical influences to which it is subjected, there may occur a retention of feces or foreign body within its lumen. These feces become solidified and by their presence induce hyper-secretion of mucus, which deposits its phosphatic and other salts as a concretion around the retained nucleus in the appendix. The authors then endeavored to demonstrate that *perityphlitis vermicularis* belongs always to the province of surgery, and that its dangers are avoidable and its recurrence preventable only by surgical interference. Such a statement may appear radical, but they sustained it by two facts which may be considered as positively proven: (1) That perityphlitis is *always* accompanied by the development of a pus-cavity. (2) That with medical treatment the patient is liable to a recurrence of the disease. Within the past three years they had made autopsies on three cases which showed that fatal peritonitis was caused by the rupture of the perityphlitic abscess into the peritoneal cavity, where its existence had not been previously diagnosticated. The dangers are: (1) Perforation of the appendix, permitting escape of its contents into the peritoneal cavity directly or indirectly by a rupture of the circumscribed suppuration. (2) Where the abscess is extra-peritoneal, by the formation of septic phlegmonous cellulitis and death from sepsis. (3) By the emptying of the contents of the abscess into some of the neighboring organs or cavities, as the bladder, kidney, or thoracic cavity.

ART. 18. *Hawkins on Colotomy at Seventy-three Years of Age: Patient Surviving Three Years Later.*—The following case is of interest, not only on account of the result, but also because of the unfavourable circumstances under which the operation was performed. The operating-room was a small, ill-lighted, cottage bedroom, the patient at an advanced age, and her nurses, two daughters, completely uninstructed in the art. The patient was suffering from cancer of the rectum, with signs of obstruction, the latter condition ultimotely becoming complete at the end of the several months treatment. Left lumbar colotomy was performed under the conditions named. The operation was perfectly simple and straightforward throughout, and the patient recovered, well and able to be up and about at the end of seven weeks. Five months after the operation she was working as usual at the sewing machine.

Medicine.

RECENT PAPERS.

19. MARTINS, DR.—Aortic Insufficiency Without Cardiac Palpitation. (*Berliner Klin. Wochenschr*, No. 47, 1889.)

20. ROUGET, Dr.—On Ainhum and Congenital Amputation. (*Gaz. des Hôpitau*, 1889).

ART. 19. *Martins on Aortic Insufficiency Without Cardiac Palpitation.*—At the Heidelberg Congress Dr. Martins showed that the doctrine that the strength of the heart-beat is exactly proportional to the work, is untenable. This is said to be proved by cases of acute distension of the left ventricle from over-effort. The converse case, demonstrated before a meeting of the *Verein für innere Medicin*, Nov. 4, 1889, was one in which, despite severe hypertrophy of the left ventricle, and increased work to be overcome, the apex-heat could hardly be felt. This peculiarity the author professes to explain clearly on his theory, formed in accordance with graphic investigations. A soldier was admitted into hospital with fever of atypic character. A systolic bruit was heard over the heart, and a diastolic bruit in the left second intercostal space. The man improved. Malignant endocarditis was diagnosed. A capillary pulse was felt on the forehead. Hypertrophy of the left ventricle then developed, and the diagnosis of aortic insufficiency became established. The pulse "celer sed non altus," the systolic murmur at the apex, and the almost total disappearance of the apex-heat, indicated some complication. Mitral insufficiency could alone explain this according to the author's theory, viz., that the apex-heat is completed during the first half only of systole, during the time of closure of the heart. The cause of the apex-heat must be sought in the order of the movements which occur. The alteration of form which the heart undergoes at this time can only cause an impulse against the thorax, when the volume of the heart remains the same. If, from any cause, the time of closure be absent, if at the moment when systole begins the outflow of blood also occurs, and diminution of volume therewith, the apex-heat will be either lessened or will disappear. These conditions are present when aortic and mitral insufficiency coexist. The objection that in pure mitral insufficiency the apex-heat is not lost is only apparently valid. In taking cardiograms in various cases of valvular failure, the author found that in mitral insufficiency almost always normal, *i.e.*, in that cardiac failure in which there is no closure-period, in which, therefore, the curve should be abnormal, it is normal, and for the following reason. In mitral insufficiency the right ventricle becomes hypertrophied and thrusts the left away from the thoracic wall. It works with greater vigour, and while the left ventricle causes no apex-heat, owing to the absence of the closure-period, the right thus takes its place. In the above case the right ventricle was not hypertrophied, hence the absence of apex-heat. The aortic insufficiency caused great dilatation and hypertrophy of the left ventricle, and an opposite condition to that caused by pure mitral disease was produced, the left ventricle preventing the right from making its impulse felt. Derangements of compensation soon set in, and in spite of temporary improvement by the use of digitalis, caused death in the above case. The *autopsy* showed a *cor bovinum*, viz., great hypertrophy and dilatation of the left ventricle, the two posterior valves of the aorta quite destroyed at the base and having large outgrowths. There was a small partial aneurysm in the septum beneath the base of the destroyed valves. The mitral valve, on the other hand, was healthy, only very widely open, corresponding to the dilatation of the left ventricle; the papillary muscles were atrophied, and showed fatty degeneration The latter could no longer function, and the diagnosis of mitral, as well as aortic, insufficiency was thus verified. In the discussion on this, Herr P. Guttmann said that the apex impulse was not seldom absent, when the impulse of the rest of the heart was present. This is especially the case in aortic insufficiency with aortic streusis. The speaker had nothing to object against the theory given above, except that a large number of observations with autopsies had taught him that, as a rule, the apex-heat is not absent in combined aortic and mitral insufficiency.

E. J. EDWARDES, M.D.

ART. 20. *Rouget on Ainhum and Congenital Amputations.*—Ainhum is a disease first described by a Brazilian physician, da Silva Lima, consisting of a spontaneous amputation of one or more of the toes by a cicatricial band. The fifth is the toe usually affected, although in some cases the fourth is also implicated, and sometimes the disease is bilateral. The appearance of the disease has been graphically described as "if a thread be thrown around a wax model of a toe in such a way as to fall behind the head of the first phalanx, and then drawn gradually tighter and tighter, so as to cut a deep furrow, allowing the distal part to remain attached by a small central pedical." After a time the distal portion either drops off, or is removed by amputation, leaving a stump, which heals quickly and kindly. This disease occurs in the negro race only. Lately an attempt has been made to class ainhum with congenital amputations. The author combats this idea, indicating at the same time the following points of differential diagnosis: *Ainhum*—(1) A disease of adult life, never appearing before the twelfth year. (2) Occurs principally in males. (3) Occurs in the negro race only. (4) The toes alone, especially the fifth, are affected. (5) The disease usually affects only one toe, sometimes two (5th and 4th), and sometimes the toes of both feet are affected successively. (6) The lesion consists of an annular groove, cutting off the member slowly and remorselessly; the disease never is rapid, and is always progressive. (7) Not associated with any other malformations. *Spontaneous Congenital Amputation*—(1) A congenital affection solely. (2) Equally frequent in the two sexes. (3) Occurs in both black and white races. (4) Toes and fingers, feet and hands, sometimes all four extremities, may be affected, in the same individual. (5) The lesions are always multiple, and all the members implicated are affected at the same time. (6) The strictures are multiple, have no special localization, and, instead of advancing, gradually disappear, or become less apparent. (7) Frequently associated with club foot, hydrocephalus, spina bifida, or perforating ulcer.

Pharmacology and Therapeutics.

RECENT PAPERS.

21. MAYNARD, Dr.—On Antipyrin in a Case of Suspected Snake Bite. (*The Practitioner*, December, 1889.)

22. LINDLEY, Dr.—On Iodoform in Diphtheria. (*Boston Medical and Surgical Journal*, vol. cxxi., No. 11.)

23. FIELD, Dr.—On Sulphonal. (*Therap. Gaz.*, Vol xiii., No 9.)

24. ILLINGWORTH, Dr.—On Biniodide of Mercury in the teatment of Scarlet Fever. (*Prov. Med. Jour.*, January, 1890, p. 6.)

25. LESLIE, Dr.—On the Cure of Facial Neuralgia and Allied Neuroses. (*Edin. Med. Jour.*, January, 1890.)

26. PATTON, Dr.—On Cardiac Therapeutics. (*New York Med. Rec.*, December, 1889.)

27. RICHARDSON, Dr.—On the application of Flour for Erysipelas and Burns. (*Asclepiad*, November, 1889.)

28. OEHLKERS, Dr.—On a Case of Catalepsy during Chloroform Narcosis.

29. REYNOLDS and HAVEN, Drs.—On the Value of Salicylate of Soda in Dysmenorrhœa. (*Boston Med. and Surg. Jour.* Dec., 1889.)

30. THORNTON, DR. BERTRAM.—The Operativ, *versus* the Therapeutic Treatment of Strumous Glands. (*Medical Press and Circular*, January, 1890.)

31. LIEBREICH, PROF.—On the Treatment of Chilblains. (*Bull. Med.*. January 1, 1890.)

32. WAUGH, DR.—On Antipyrin in Dysmenorrhœa. (*Lancet*, January 11, 1890.)

33. O'Connor, Dr. Bernard—On a New Antiseptic. (*Med. Press*, January 22nd, 1890.)

34. Peirce, W., M.C.—The Treatment of Enteric Fever by Acetanilide. (*Practitioner*, January 1890.)

Art. 21. *Maynard on Antipyrin in a Case of Suspected Snake-Bite.*—In the *Practitioner*, Dec. 1889, p. 435, Mr. Maynard records the following case from India. At 8.30 a.m. on July 11th a small fox-terrier bitch belonging to the author was smelling about in the long grass, when she was suddenly seen to jump and run towards the bungalow. On examining the dog, the marks of a tooth-bite were seen on the left side of the tongue. The dog soon seemed very restless and convulsions set in. About an hour afterwards the dog lay quite unconscious, with dilated pupils, head drawn back, and all four legs perfectly rigid; no fœces or water passing. Some whiskey was given to the dog, and the temperature was found to be 106°·2 F. Having some antipyrin in his pocket, Mr. Maynard gave the dog ten grains in a little whiskey at 9.45 a.m. At 10.15 the temperature was 104°·2 F. but the spasms remained the same, though the pupils were contracting. Another dose of antipyrin was then given, and at 10.40 the temperature was 101°·8 F. At 11 a.m. five grains more antipyrin were given, the temperature was normal, and the dog seemed nearly well. She slept the remainder of the day, but has been quite well ever since. Altogether she had gr. xxv. of antipyrin and ʒip of whiskey. It was unfortunate that the author could not be certain what had bitten the dog, but it was probably a snake of some sort; however, the case is very interesting, and it would be useful to follow up the value of antipyrin in cases of snake-bite.

Richard Neale, M.D.

Art. 22. *Lindley on Iodoform in Diphtheria.*—The author remarks that the combination of symptoms in bad cases of diphtheria resembles very much that found in urœmia—scanty urine, retained urea and abundance of albumen; the one great distinction, however, is that there are no convulsions. But, he suggests, the toxic element in diphtheria may have such an action as will control the convulsions, and if so, the resemblance is complete. Dr. Lindley began the use of iodoform several months ago, and has used it altogether in 9 cases; of which all but one recovered. The fatal case was complicated with bronchitis, and had a deposit of one half albumen in the urine. The patient improved very considerably and the albuminaria disappeared, but she took a chill and died on the 17th day from intercurrent pneumonia. The method of applying the iodoform was by a daily insufflation through the mouth or nose, and the application was so made that the membrane was completely covered with the crystal. The advantages claimed are as follows:—(1) It prevents the multiplication of bacteria. (2) It is a soothing local anodyne. (3) It has, in a diphtheritic patient, no toxic action. (4) It is so nearly impalpable that it reaches all parts of the diseased surface. (5) It remains long adherent. (6) It causes no nausea. (7) It does not produce salivation or diarrhœa. (8) It is quickly and easily applied.

Art. 23. *Field on Sulphonal.* The author begins by remarking that a need has long been felt for something which would supersede chloral. In America, at least, great prejudice against it has been created by the lay press. So much has this been the case that in some instances the physician who prescribes it is threatened with the loss of his patients' confidence. Dr. Field's experience of sulphonal extends over ten months, during which he prescribed it in 200 cases. Three conditions are necessary to success in its use. First, the time. Sulphonal is slow to act, and requires to be given at least one hour, and very often two hours, before its physiological action begins. The patient should be informed of this, and should be directed not to get into bed until slight drowsiness supervenes. Sleep once established, must not be disturbed, or the drug will produce a dazed lethargic condition for the rest of the day. Secondly, the method of administration. Experience shows that sulphonal is best dispensed in finely divided powder; the crystals are apt to irritate the stomach, and sometimes set up vomiting, and the lozenges or tablets are so insoluble as to necessitate a dose about three times as large as that of the powder. One of the best ways to give the powder is to put the dose on a moistened spoon, insert it in the mouth and follow with a free draught of water. Sulphonal appears to be equally effective when given *per rectum*. The third condition is the determination of the proper dose. The doses originally ordered were made too large. Ten grains is commonly enough, 15 is very often too much. A very comforting point about sulphonal is, that with frequent use the effective dose may be diminished Thus a person who begins with 15 grains finds after several repetitions that 12 or even 10 will suffice, and, later still, he will get a good night's rest with 7 or 5 grains. Sulphonal may be safely given to infants in doses of 2 grains; but it is of no service where, as is commonly the case, the sleeplessness is due to gastro-intestinal disturbance. Sulphonal is by no means free from the disturbing action of idiosyncrasies, and it may be laid down as a rule that a patient who does not sleep with 20 grains will not sleep with any dose. Sulphonal is especially indicated for cases of sleepnessness due to worry or brain disturbance of any kind, and for those cases where chloral and opium are contra-indicated. The author's conclusion is that sulphonal has "come to stay," and that it has already asserted its right to stand first in the class of hypnotics.

Ralph Leftwich, M.D.

Art. 24 *Illingworth on Biniodide of Mercury in the Treatment of Scarlet Fever.*—Dr. Illingworth records five cases of scarlet fever treated by the biniodide of mercury, in which the disease was aborted in each case in seven days. As soon as the rash was well marked, the following mixture was given:—sol. hydrarg. bichlor. ʒvj; potass. iodid. gr. xv; spirit. ammon co. ʒj; syrup ʒp; aq. d. ʒvj; one twelfth part to be given every two hours. The throat to be sprayed every fours hours with 1 in 2000 biniodide in sodic iodide. On the seventh day of the disease, in a child of nine years old, the rash had quite gone, the temperature was normal, and the tonsils were granulating. In three other cases the same treatment was used with a similar result. In one, not at first "throat painted," the disease caused otitis by extension along the eustachian tube. The only case of cervical abscess was one in which no local application was made. In one case, urgent purging came on within twenty-four hours, so the mixture was stopped, and the liquor ferri. perchlor. fort., given every two hours in two-and-a-half minim doses, with a powder of one-sixteenth gr. of the biniodide three times a day. As regards infection, the author states he has since found that by painting the throat with 1 in 500 solution every 4 hours the disease is prevented from spreading; desquamation is merely scurfy, and chiefly confined to fingers and toes.

ART. 25. *Leslie on the Cure of Facial Neuralgia and Allied Neuroses.*—Mr. Leslie, M.B., states that about three months ago he found he was able to arrest a very severe attack of supra-orbital neuralgia in a very short time by applying common salt to the nasal mucous membrane. During the last three months the author has been following up this method of treatment in cases of neuralgic headache, faceache, toothache, earache, etc., and has found that in nearly every case a rapid cure is obtained. Common table salt may be used by the patient as snuff, a pinch being taken into the nostril of the affected side; but the best results have been obtained when the salt has been applied by means of an insufflator. In practice, the author charges a small insufflator with about four grains, and the patient is told to draw air up the nostril while the contents of the insufflator are injected. The application produces little pain or discomfort, and relief is speedy. The stimulation by chloride of sodium appears to induce in the nasal branches of the fifth nerve a form of nerve motion, which causes reflex inhibition of the pathological process in the nerves affected, inhibits the abnormal form of nerve-energy, of which the expression is pain, and replaces it by the normal form, of which the expression is not pain. Although a single application usually suffices for the immediate inhibition of neuralgia, especially when it is recent and localized in one branch of the fifth nerve, in other cases, where the disease has been of long standing and of extensive distribution, it may be necessary to repeat the insufflation every half minute for about five minutes.

ART. 26. *Patton on Cardiac Therapeutics.*—Dr. Patton publishes an address on the treatment of chronic conditions of heart disease. Patients suffering from stenosis of the aortic valves may exist for years without medical aid, until the hypertrophy of the left ventricle becomes excessive and is no longer able to perform the extra work. With regurgitation from insufficiency it is different, and, as a rule, treatment is necessary from the commencement of the disease. Where disease of the aortic valve is of rheumatic origin, patients do well on iodide of potash combined with bicarbonate of potash, iron, attention to the nutrition, with moderate exercise. Antipyrin has been tried as a remedy for angina pectoris. Elvy says it is to be avoided in true angina, because of its injurious effect on the heart muscle, and because of the danger of dilatation; but Prof. Sée says it is perfectly safe, and very efficient in gramme doses, one hour apart, till four or five grammes are given, or hypodermically half a gramme in distilled water may be given. Galvanism is of benefit in some cases of neuralgia or angina of cardiac origin. Digitalis still maintains its place at the head of the list of cardiac tonics. Moderate doses slow the pulsations, increase their force, fulness and regularity; the vascular tension is increased; the best effects are obtained after some days of administration, and may remain some time after ceasing the drug. The tincture is the best form to use to produce action on the heart, the infusion when stimulation of the kidneys is desired. The particular valvular lesion originating the trouble is of little import in determining the necessity for its use; the comparative amount of hypertrophy and dilatation, and the integrity of the muscular fibre, are the conditions which determine the indications or contra-indications for its employment. Fatty heart, or granulo-fatty degeneration of the muscular fibre are positive contra-indications where the majority of the fibres have been subjected to this change. Whatever may be the direct method of its action, it is undoubtedly a fact that in Strophanthus we have a useful cardiac tonic. It is very good in cases of œdema of the legs, congestion of the liver and internal organs, and in cases where the patient is unable to lie down to sleep on account of weak and irregular action of the heart.

ART. 27. *Richardson on the application of Flour for Erysipelas and Burns.*—Dr. Richardson asks why the application of flour to an inflamed surface, such as a burn or in erysipelas, should be so common a practice. In nine cases out of ten no care has been taken to ensure the flour is of the best quality, and any kind is called into requisition, wheat flour, barley flour, oat flour, rice flour. Flour cannot be a styptic; it is not a cooling substance; it is not antiseptic, and it becomes on an inflamed surface one of the dirtiest applications that can be conceived. It encrusts; it decomposes; it goes off as an offensive dust, and it plays no part whatever except that of retaining the excreted fluid from the surface on which it is cast. The time has come when a measure so foolish, and worse than useless, should be consigned to antiquity. RICHARD NEALE, M.D.

ART. 28. *Oehlkers on a Case of Catalepsy during Chloroform Narcosis.*—A little girl, aged 10 years, had an abscess on the cheek requiring incision, which she so strongly opposed that chloroform was administered, the father being present to soothe the child beforehand. She became very quiet and refused to answer questions just before chloroform was given, and the face had a dusky aspect and determined expression. Perfect narcosis took place in a few minutes, the face losing its duskiness. The incision was made and dressings applied, after which the operator slightly shifted his patient and found the limbs flaccid. In a few minutes the author turned to see whether she was coming to again, and found her arm in a strange position. On raising it, it remained stiff where it was elevated. The right arm and fingers were the same; they could be raised or flexed but could not be extended without a degree of force which the author did not care to employ. After about 10 minutes this condition slowly ended, and the limbs slowly came back to their earlier positions. The face had again become dusky. The cataleptic condition lasted about 20 minutes, and the narcosis persisted for about 6 minutes afterwards.

ART. 29. *Reynolds and Haven on the Value of Salicylate of Soda in Dysmenorrhœa.*—Drs. Reynolds and Haven contribute an article on the results obtained in thirteen cases of severe dysmenorrhœa treated by means of salicylate of soda. Of these cases nine were completely, and two partially, relieved. It was given in ten grain doses, three times a day for the week which preceded the catamenia, and continued until the time when the pain usually disappeared. Three of the patients were cases of salpingitis and they were promptly relieved. Three were suffering from anteplesion, one of these was not improved, one was partly, and one completely relieved. Five cases were unexplained, and in two of them, where the organs appeared normal, relief was speedily obtained; two others were not examined, but only one of those was relieved, and the fifth case was one of cystocele and prolapse, which condition was relieved by a pessary, but it had no effect on the dysmenorrhœa until the salicylate was given, then relief was speedy. One was a case of membranous dysmenorrhœa which was not wholly relieved by the drug. One patient with endoceroicitis was very quickly relieved. The authors have not tried this method of treatment long enough to know if any permanent benefit was derived, but merely publish their results in the hope that others will give a trial to this drug in the treatment of dysmenorrhœa.

ART. 30. *Thornton on the Operative versus the Therapeutic Treatment of Strumous Glands.*—The author begins by alluding to the records of the last fifty years at the Royal Sea Bathing Infirmary, Margate, which testify to the unsatisfactory and tedious method of treatment prevailing up to within the last few years. Having reviewed the various different stages, such as erosion, by poultice, iodine painting, mercurial ointments, calcium sulphide, &c., injection of various drugs and applications of strong caustics, he points out that whatever action these methods have on the diseased glands, the process is very tedious and uncertain, and the resulting scars most unsightly. An operative experience of about one hundred cases of various degrees of magnitude leads him to urge the excision of every enlarged gland or part of a gland, after a reasonable period, say—six or eight months—of constitutional treatment and change of air at the seaside. Modified operations, such as scooping, aspiration, small punctures with drainage are nearly always unsatisfactory, as diseased gland tissue is left behind. Hitherto, he has fortunately had no death or serious complication to record, and the vast majority of cases have healed rapidly. He claimed for the method of excision that many months of tedious treatment are saved, the resulting scars are less unsightly, and that the operation, if performed with skill and care, and in good hygienic surroundings, is usually satisfactory.

ART. 31. *Liebreich on the Treatment of Chilblains.*—As a prophylactic the feet should be washed regularly with a lotion containing: ℞ alum. sulph.; soda biboratis, of each 5 grammes; aq. rosæ, 300 grammes. He also recommends the use of one or other of the following ointments: ℞ soda biboratis, 5 grammes; ung. simpl, 25 grammes; or a mixture of two parts of camphorated oil with twenty parts of lanoline.

ALFRED S. GUBB.

ART. 32. *Waugh on Antipyrin in Dysmenorrhœa.*—The author having recently noted highly satisfactory results from the administration of antipyrin in several instances where little or no benefit followed the use of morphia, belladonna, spirits of chloroform, apiol, etc, gives the following details concerning the most severe of those cases. Relief, more or less complete, was obtained whenever antipyrin was used.

A. H——, unmarried, aged 26, consulted him on April 25th, 1889. She complained that for ten years past—almost since her first menstruation, which was at the age of 15—she had suffered excruciating pain before, during, and after each monthly period. Of recent years her sufferings had gradually become more severe; for a week in every month she was confined to bed, but was unable to sleep except in unrefreshing snatches. The pain was so acute that she several times, while in bed, fainted away. She had invariably for two days violent retching and sickness, which were so severe that on one occasion she ruptured one of the conjunctival blood vessels; this was treated at Moorfields Ophthalmic Hospital. The flow lasted usually four days; the pain began two days before, and persisted till one or two days after. When the period was over there remained great pain in the right hip and thigh; though not sufficient to lay her up. This pain caused lameness, considerable at first, but gradually becoming less during the nine days it lasted. An unusual symptom was a desquamation of the fingers, which began two or three days after the close of each period; the skin of the fingers of both hands peeled off, and deep transverse fissures, which sometimes bled, appeared on the palms of the hands and on the palmar aspect of the fingers. The patient's relatives and friends assured him that the above symptoms were not exaggerated, and that the girl was hard-working, sensible, and patient in her sufferings. On April 25th he prescribed six powders, each containing 10 grains of antipyrin—one powder to be taken every four hours, dissolved in a little water. Menstruation began on April 27th and lasted till the 30th. As a result she had no sickness (the freedom from which she considered a great boon) and much less pain, but there were still the lameness and the desquamation, the latter of which he had an opportunity of seeing. Vaginal examination showed acute anteflexion, a conical cervix, and a small os. The introduction of a pessary relieved bladder symptoms, of which she had complained. For the low state of her general health resulting from her periodical compulsory starvation, he prescribed ferri et ammon. citr., liquor arsenicalis and glycerine, with pil. aloes c. ferro. Menstruation began again on May 28th, and for this period she had eight 10-grain powders. On the first day the pain was severe, and she used her antipyrin rapidly. As she did not get a further supply, the relief was not so complete as it might have been, and there were again some lameness and desquamation. Menstruation took place on June 27th to 29th. As 60 and 80 grains given in frequent 10-grain doses had produced no bad effects, he instructed her to take the antipyrin in larger doses and oftener. This she did with complete success. She took 150 grains as follows:—20 grains on June 26th at 9 P.M.; June 27th, 20 grains at 9 and 1, and 10 grains at 6 and 11; June 28th, 10 grains at 8, 12, 4, and 11; 29th, 10 grains at 10 and 10; 30th, 10 grains at 10 P.M. only. During the period she was not laid up; she had no pain or sickness; she went about housework as usual; was able to go out of doors; had afterwards no lameness and no desquamation. For the period, July 23rd to 26th, she used 150 grains with the same result; and 100 grains at the August menstruation acted so satisfactorily that she described it as the best time of all. During the September flow she was able to assist her sister in a busy fancy stationery retail business. Menstruation passed off so well on October 22nd to 24th that 80 grains sufficed to prevent the symptoms. Her general health had much improved, and this fact, with the smaller amount of antipyrin now required, encourages the hope that the improvement may be permanent.

ART. 33. *O'Connor on a New Antiseptic.*—"Periodate," (Weaver's) is a compound of per-iodic acid, with metallic oxides and alkalies of a non-toxic character. Its exact chemical formula has not yet been defined, but it is under investigation. It is the active agent in several distinct preparations, but his investigations have been principally concerned with the pure per-iodate crystals, in the form of a white powder, and a specially-prepared (red) solution of it (1 : 500) in combination with a permanganate and perchlorate of soda. At first he used the powder and the solution experimentally on ulcerated surfaces generally, and he was much struck by the almost immediate and unusually beneficial effect that was produced. This was most marked in ulceration of the nose, mouth, and throat. He then observed that, of two cases of profuse diarrhœa induced by the ingestion of tainted food, one yielded to the administration of a single 10-grain dose of the powdered salt, and the other was cured by three such doses in six hours. It had been noticed that the flatus attending such cases had been rendered odourless by the per-iodate, and that the salt completely removed pyrosis, flatus and the sour eructations of certain gastric disorders. Some antiseptic action was naturally regarded as the explanation of these results, and the correctness of this view is borne out by the observation of Dr. Klein that the per-iodate solution "is a very powerful disinfectant, it kills *instantly* cholera, comma-bacilli and typhoid fever bacillus when used in 1 in 5,000 of water," anthrax bacillus in 1 : 40,000, and it has the additional advantage of being quite harmless when administered internally in doses of over 230-grains and probably in unlimited quantities. Over three years ago several ½ lb. mutton chops were dipped for a few seconds into a watery solution of the crystals (of such a strength that not more than about 1-10th of a grain of the salt could have been removed by each of the chops) and then hung up in a dry place. At the time of writing they are found to be perfectly free from taint, although the salt has no destructive action on the grubs of the blow-fly or the common aërial moulds which are harmless. Its action is upon the micro-organisms of putrefaction and those which cause disease to the animal body, being, in these respects the converse of the action of the most universally used *so-called* "disinfectants" (carbolic acid, chloride of zinc, and sulphurous acid), which, according to Dr. Koch, have little or no destructive action on the spores of disease. Repeated observations of the above description warranted a trial in a case of severe diarrhœa with what were described as "typhoid symptoms;" after *one* dose the diarrhœa ceased, and the patient rapidly recovered. Sinus (following a bubo) not yielding to ordinary treatment, was twice injected with a dilute solution, and the sinus was healed on the third day. A case of purulent ophthalmia was practically cured after three applications of a lotion. A single application to the mouth, fauces and throat, reduced hourly paroxysms of whooping cough to two in the day. The temperature of enteric fever was considerably lowered after the daily exhibition, during three days, of three 5-grain doses of the salt, and on the fourth day it was normal. He claims for this per-iodate that it is, as far as is at present known, the most powerful antiseptic ever used, and after a three years' experimental experience of its action, he hopes that we may have at last, met with a trusty weapon against tuberculosis.

ART. 34. *Peirce on the Treatment of Enteric Fever by Acetanilide.*—The author considers that in acetanilide we possess a medicine which by influencing metabolism, enables us to reduce temperature with certainty, rapidity, and safety. This is effected by acting on the vaso-motor system, and also by lessening the combustion of glandular and muscular tissues, the chemical destruction of which, especially in case of muscular action, is recognised as the most direct source of bodily heat. Acetanilide by restoring deteriorated nerve power, or at least by compensating for impaired thermal function prevents, in the author's opinion, excess in thermogenesis, besides its evident action of reducing temperature by dilatation of cutaneous vessels, and by inducing perspiration. He has generally found it best to give the drug in 5-grain to 10-grain doses; repeating the dose whenever the temperature exceeded a certain point (101°—103°) according to the case, up to six or eight times, if necessary in twenty-four hours. After each dose the temperature generally, after a slight oscillating rise, falls perceptibly in less than forty minutes, and attains its minimum in from to four hours. The reduction is most obvious when the drug is given synchronously with the usual remissions of temperature. When the depressed temperature rises with the suddenness of a released spring, as the effect of acetanilide is passing off, the author checks it again boldly before typhoid stupor has had time to supervene. Under this treatment it generally happens that the tongue becomes moist, the vaso-motor system is gently stimulated, free perspiration ensues, and peripheral anæsthesia is produced, associated with a feeling of ease and pleasure which surprises and delights the patient. By continuing this treatment throughout the disease, asthenic delirium is averted, assimilation and nutrition are improved, and organic degeneration, bed sores, and exhausting suppuration are generally prevented. A table is published showing nine deaths (4·7 per cent.) in 191 consecutive cases of typhoid treated in the Coast Hospital, Sydney, during eight months ending August 31, 1888. The author draws attention to the fact that an alarming but transitory cyanosis is often induced by the free use of acetanilide in fever. Although this cyanotic condition of the face, hands, etc., is frequently accompanied by slight dyspnœa and irregular action of the heart, these alarming symptoms always subside with rapidity, and do not seem to indicate the necessity for more than a temporary suspension of the medicine, its use in diminished doses for a few days, on the occasional substitution of belladonna and digitalis, together with the hypodermic use of camphor, if a tendency for a collapse exists.

Gynæcology and Obstetrics.

RECENT PAPERS.

35. LANG, Dr. C.—A Case of Unusual Tolerancy of the Pregnant Uterus. (*N. York Medical Record* Dec. 28th, 1889, p. 707.)

36. HURD, DR. E. P.—On the Treatment of Albuminuria and Eclampsia of Pregnancy. (*Therap. Gaz.*, Nov. 15, 1889.)

37. Death from Rupture of a Tubal Gestation. (*Med. Press*, Jan. 1890.)

38. TYSON, DR.—On the Induction of Premature Labour in Renal Disease associated with Pregnancy. (*Journ. Amer. Med. Assoc.*, 1889.)

39. DUMONTPALLIER, DR.—On the Treatment of Endometritis. (*Gaz. des Hôpitaux*, Oct. 22, 1889.)

40. SMITH, Dr. R. T.—On a Case of Hysterectomy, Complicated by Acute Gangrene of the Wound—Recovery. (*Med. Press*, Jan. 1890.)

41. CHANDELEUX, DR.—On a Case of Laparotomy for Abdominal Gestation. (*Lyon Méd.*, January 12, 1890.)

42. Bumm, Dr. — On the Ætiology of Septic Peritonitis. (*Annales de Gynécologie*, January, 1890.)

43. Warker, D. Van der.—On Sloughing Intra-Uterine Fibroids (*Annals of Gynæcology*, 1889.

Art. 35. *Lang on Curetting of Pregnant Uterus not followed by Abortion.*—A woman came under a physician's treatment a few months after delivery, for what was diagnosed as "subinvolution and parametritis." In the course of three months the uterus was twice scraped by a Thomas's blunt-edged curette. The physician, with Dr. Lang and a third medical practitioner, afterwards saw the patient in consultation. A curette was once more introduced for purposes of measurement; it passed into the uterine cavity up to its ebony handle. Although the uterus was enlarged, as at the fourth month of pregnancy, the history and the results of treatment appeared to contra-indicate that condition. The consultation was held in May, 1889. The patient was delivered of a healthy child late in September. [Passage of the sound, &c., up to its handle, in a case where no fibroid disease of the uterus exists, is a phenomenon not always easy to explain. In many such cases seen in out-patients' departments, pregnancy may exist without being considered probable, as in Dr. Lang's patient, and the cases being lost sight of, as is so common in hospital practice; the medical officer who records them may persist in error. In other cases, where the after history proves that the patient was not pregnant when the sound was passed, it is believed that the Fallopian tube has been entered by the instrument, or that the uterine wall has been perforated. (See London Medical Recorder, vol. xv., p. 184, art. "Gönner on Catheterisation of the Fallopian Tube"). Whichever theory be true, experience proves that serious consequences are rare in these cases.—*Rep.*]

Alban Doran.

Art. 36. *Hurd on the Treatment of Albuminuria and Eclampsia of Pregnancy.*—The treatment of puerperal eclampsia includes the prophylactic treatment and the treatment of the convulsive seizures. Many pregnant women have albuminuria and nephritis, and go to their full term without convulsions. In other cases there are early warnings that there is danger ahead. Among the symptoms of renal insufficiency are headache, drowsiness, tinnitus aurium, perhaps more or less dimness of vision, or blindness of one or both eyes, dizziness, dyspnœa, especially on exertion, nausea, and vomiting; the urine is scanty and loaded with albumin, while the percentage of urea is not more than one-half or one-fourth the normal. Here the duty is plain. The patient must refrain from work, be put on a diet of milk, with or without Vichy water, and fruits, with a minimum of animal food. Saline diuretics, as cream of tartar or acetate of potassium, may be prescribed, and tincture of chloride of iron in full doses three times a day. Also a full dose of Glauber salts in the morning to promote free elimination by the bowels. It may be expedient to give at bedtime a full dose of fluid extract of jaborandi, to produce profuse sweating, or to administer hypodermically one eighth of a grain of pilocarpine, or even resort to the wet-pack or hot-bath. If, in spite of these efforts to relieve the engorged kidneys and protect the irritated nerve-centres, the patient becomes worse, and convulsions seem imminent, premature labour should be induced. When called to treat a woman already in convulsions, if labour has not already commenced, it must be expedited by artificial means under chloroform. If labour is advanced, and the os is dilated or dilatable, the patient must be immediately delivered by the forceps or by version. A ten-grain calomel powder may be placed on the patient's tongue, and, if the vascular tension seems high, 16 ounces of blood may be taken from the arm. It will seldom be desirable to repeat this venesection. Chloroform should be administered to complete anæsthesia, and the patient should be kept under its influence as long as convulsions threaten. As adjuvant to the chloroform, a full dose of chloral may be given by mouth or by rectum. Possibly, in obstinate cases, a hypodermic of morphine may be advisable.

Art. 37. *Death from Rupture of a Tubal Gestation.*—An inquest was held last week at Hucknall Torkard, Notts. on the body of a young married woman whose death had occurred under somewhat mysterious circumstances. It transpired that she had been taken suddenly ill on the morning af the 12th instant, and the medical man who was called in found her collapsed and pulseless. He prescribed for her, and when he saw her later in the day she appeared to have rallied somewhat, but died before he could be fetched a third time. The deceased was known by the medical man to have been pregnant, but it does not appear to have occurred to him that this had anything to do with the fatal *dénouement*, for he gave a certificate to the effect that death was due to cardiac syncope. As rumours were current of the ill-treatment of deceased, he subsequently thought it desirable to withdraw the certificate, and an inquest was therefore deemed necessary. A *post-mortem* examination was made, the result of which was to show that the fatal result was due to rupture of a tubal pregnancy. No fœtus was found, but the presence of placental tissue afforded sufficient evidence of the nature of the case. This instance shows how necessary it is for medical men to be on their guard against this unforeseen and terrible complication. Had the case been promptly diagnosed—and the diagnosis presents no extraordinary difficulty when rupture has taken place—it is quite possible that timely intervention might have saved the patient's life. It ought never to be lost sight of that the supervention of the classic symptoms of internal hæmorrhage, especially in the course of pregnancy, is presumptive of ruptured ectopic gestation, and many lives have been sacrificed to a lack of discrimination in this respect. The obscurity which formerly enveloped this condition has of late years been largely cleared up by Mr. Tait and others, who have laboriously ascertained and promulgated the symptoms upon which the diagnosis of rupture may be based, and the appropriate treatment, according as the rupture is into the broad ligament or the peritoneum respectively.

Art. 38. *Tyson on the Induction of Premature Labour in Renal Disease associated with Pregnancy.*—The author recommends the induction of premature labour with a view of saving the life of the patient, first, in cases of Bright's disease complicating pregnancy where in a previous pregnancy there has been puerperal nephritis with grave complications; second, in all primiparæ in whom there is Bright's disease previous to pregnancy. In the remaining cases no definite course can be laid down. In general, however, it may be said that the supervention of uremic symptoms demands immediate interference; but, in consequence of the variety of these, and their occassional simulation by symptoms due to other causes, great care must be observed lest an error in diagnosis be made. So, also, a marked degree of other symptoms of Bright's disease, such as interfere with important functions, may justify interference. As a rule, too, the same symptoms are more serious in robust than delicate women, and in a first pregnancy than in subsequent ones. "In these cases, therefore, when the symptoms are of a positive or dangerous character, I should also favour the induction of premature labour."

ART. 39. *Dumontpallier on the Treatment of Endometritis.*—Between June and October of last year he treated 70 cases of endometritis, either purulent or hemorrhagic by crayons of chloride of zinc and rye flour, and his results fully confirm those already announced. Sixty-seven cases were cured without complication; in 28, menstruation was re-established before leaving the hospital service, and in nearly all the others since. Of the three other cases, two have slight cervical atresia, and the other one left the hospital before conpletion of the treatment, but still notably improved. Based on these results, Dr. Grandmaison presents the following conclusions: (1) the treatment of Dr. Dumontpallier furnishes admirable results. (2) The crayon itself affords positive guarantee of antisepsis. (3) By its simplicity, by its ease of application, and by the certainty of cure, it constitutes an excellent method of treating endometritis; the more so since it may be undertaken by any physician who does not care to assume the responsibility of curetting—a bloody operation, necessitating vigorous antisepsis—which has not yet become a medical habit.

ALFRED S. GUBB.

ART. 40. *Smith on a Case of Hysterectomy, complicated by Acute Gangrene of the Wound—Recovery*—The patient, E. W., æt. 45, a widow, fat and anæmic. with flabby muscles, who during twelve years of married life had had no family, was first admitted on Oct. 22, 1888, suffering from an abdominal tumour.

Eighteen months previously she first noticed that her abdomen was getting larger, but she had suffered no pain nor inconvenience on that account except lately. Menstruation had been normal until three years ago, when the amount of loss became so slight that she concluded the "change of life" had come. In March, 1889, between the first and second sojourns at the hospital, she had a very profuse period, and since then the menstrual flow has lasted for from eight to thirteen days, at intervals of three weeks. During the last four months the discharge had been much clotted, and she has had much pain in the hypogastric region. She had never been laid up previously. For the last three winters she suffered with "bronchitis." Her father was consumptive, and one sister had died of cancer of the woumb. On the first admission the abdomen was found to be prominent in the lower part with a tumour, which was central, four inches wide, reaching upwards to the umbilicus, moveable laterally, and to a lesser extent in an up and down direction. The vaginal examination showed the cervix to be one inch long, high up, central and quite mobile, there being no evidence of old pelvic cellulitis. The sound passed five inches; the endometrium was very rough. She was in the hospital for three months, and had a constant (galvanic) current applied to the uterus nine times, on the supposition (which proved to be correct) that the tumour was a uterine fibroid. The tumour did not alter materially in size or position, though from time to time there used to be a marked enlargement upwards into the right hypochondrium, accompanied by much pain, and the passage of large clots, after which the swelling decreased again. (When the uterus was examined after removal it was found that the enlargement was mainly due to a sessile submucous fibroid growth on the left side. Between the surface of this growth and the right internal wall of the uterus the cavity of the organ formed a potential space of considerable size, and probably the alternate filling of this cavity with blood, and emptying of it, caused the changes in size and shape of the uterine tumour, noticed above.) The patient had four periods during the time she was in hospital. On two of these occasions the loss was free, but she had a good deal of pain. When she left the hospital on Jan. 28, 1889, her general health had considerably improved, and she appeared to be less anæmic.

She was readmitted on May 15, 1889, when she stated that since she had been at home her periods had been prolonged, profuse, and painful, while her general health had at times been very good, but latterly had been failing. She was now found to be suffering from sub-acute bronchitis, which was general. The circulation very weak; patient anæmic; there was, however, no evidence of *organic* heart disease. The tumour was now observed to be rather larger, reaching to one inch above the umbilicus.

Hysterectomy was performed on May 27. The incision reached nearly to the umbilicus. The tumour was free from adhesions. The pedicle was secured with a serre-nœud and tranfixing pins, and was covered in with the free edge of peritoneum carefully sewn over it. It was dusted over with powder of burnt alum and exsiccated sulphate of iron, and surrounded with dry sal. alembroth dressing. The broad ligaments were ligatured with silk separately before the wire could be passed round the pedicle; the serre-nœud was in the first instance tentatively screwed up, but the wire seeming to be rather too close to the bladder, was loosened again, and finally tightened up at a level rather nearer the surface of the stump. The operation lasted one hour and forty minutes. Patient suffered much from shock, and rallied but slowly. May 29.—Wound doing well. Stump quite dry. Serre-nœud been tightened up a little from time to time as the wire has become slack. The patient's general condition, however, was unsatisfactory, the extremities being cold and clammy, they having been so ever since the operation. There was a very offensive diarrhœa, the stools of a greenish colour. The temperature after the operation was 97°. It has risen steadily, each observation being higher than the previous one, until at 8 p.m. on this date it was 102°·4. Pulse has varied between 90 and 105, and has been very weak all along, often so feeble as to be scarcely perceptible. June 1 (noon).—The discharge from the wound continuing to be very offensive, and the stump now feeling quite loose, as if the pedicle had almost sloughed through, the remaining tissues were cut through. The pedicle remained in its place in the wound; it was soft, moist and sloughing in its entire thickness; the portion of the parietal wound in its immedite proximity was covered with slough, some parts of which were black. The edge of the wound was thick, raised, of a dull red colour, and waxy, œdematous appearance. The smell was very offensive. The wound was well irrigated, and dried. Pure liquid carbolic acid was applied freely to the slough, and the wound then filled with a dry sal. alembroth dressing. Its upper part appeared to be well united, and the sutures (which were quite loose) were removed. Diarrhœa less. Temp. 99°·6.

1, 2 (midnight).—Diarrhœa has practically ceased for some hours. The patient comfortable; tongue moist and clean. Abdomen distended and tympanitic, but not at all tender; she took nourishment well, and was not sick. Pulse very small in force and volume, and irregular. The wound has a very offensive thin discharge; there are black sloughs everywhere. It was well irrigated; all the loose portions of slough were removed with scissors and forceps, and it was treated and dressed as before.

2 (2 a.m.).—The wound broke down from end to end, and the gangrenous pedicle fell back into the pelvis. Coils of small intestine—injected on the surface, and very sticky to the touch—protruded into the gaping cavity. An hour later (Dr. Smith having been sent for meanwhile) the wound was closed with silk sutures, except at the lower angle. At this point a drainage tube was laid to provide an exit for the discharge from the pelvis and lower part of peritoneum. A dry dressing applied as before. The woman appeared to be *in extremis*, and seemed scarcely to feel the operation at all. 10 a.m. –The patient appeared in much the same condition as before. She was very feeble; extremities cold and clammy, though temperature (in axilla) is 102°·4. She, however, took nourishment and stimulant, and was not sick. The wound still very offensive. It and the pelvic portion of the peritoneal cavity were well irrigated with carbolic lotion 1 in 60, to which lin. iodi. three parts to a pint, had been added. The sloughing surfaces were dried, and treated with pure liquid carbolic, the application being also made to the sloughing pedicle and proximal portions of the broad ligaments down in the cavity of the pelvis.

5.—She has steadily improved to present time. The upper part of the wound has healed, but the lower fourth presents a sloughing surface and gapes; a couple of coils of gut can be plainly seen in the bottom of the wound.

7.—General condition still improving. She took food rather better, and was not sick; diarrhœa has ceased. The wound now begins to have a healthy granulating surface. Several good sized portions of slough have been removed from time to time (with scissors and forceps) from the deep portion of the wound in the pelvis, and this morning a mass of silk ligatures came away from the left broad ligament. Dressings as before. 10.—From this time the wound healed steadily. Convalescence was, however, interrupted by two attacks of phlebitis (one in each femoral vein), accompanied by a good deal of fever. On July 22 the wound had quite closed. This was fifty-six days after the operation. She was discharged convalescent on July 31, and has since reported herself as quite well. *Remarks.*—The points of interest about this case are: 1.—That the patient was an anæmic person, a subject of chronic bronchitis, and had a very feeble circulation. 2.—This occurrence of gangrene in the wound, causing the sloughing stump of the uterus to fall back into the pelvic cavity. 3.—The application to the sloughing parts within the peritoneal cavity of pure carbolic, and irrigation of the lower portion of the peritoneum with a fairly strong solution of carbolic and iodine, necessitated by the septic condition of the parts. 4.—The evidently unhealthy condition of the venous system, as shown by the supervention of phlebitis, to which the patient had been subject on previous occasions. 5.—The healing of the wound in fifty-six days, the usual time in ordinary cases, where everything goes on satisfactorily, being about forty-five to fifty days.

ART. 41. *Chandeleux on a Case of Laparotomy from Abdominal Gestation.*—The patient was a married woman, aged 37. Extra uterine pregnancy had been diagnosed, and she was sent on to the hospital for operation, where she was admitted on June 10, 1889. Married at the age of 21, the menses had always been regular until eleven years later, when she became pregnant and aborted at four and a half months, followed by peritonitis, which kept her in bed for six months. The menses recurred six weeks after the miscarriage and continued regular until April, 1888, when the symptoms of pregnancy once more made their appearance. She suffered a good deal of pain during pregnancy, due to attacks of sub-acute peritonitis, and the fœtal movements were well marked. At the expiration of nine months labour pains set in and lasted for four or five days, when the fœtal movements ceased to be perceptible. No sanguineous discharge at this period, although between the fourth and fifth months there was a daily recurring slight hæmorrhage. The death of the fœtus was followed by comparative ease for a fortnight, when the pains began again At the end of three weeks she left her bed, but was woefully emaciated and weak. On admission the fœtus could be felt through the abdominal walls, and the cervix was small and diverted to the left. The uterus was three inches deep, and the movement of the fœtal sac did not involve the cervix. In the right *cul-de-sac* was felt a hard tumour, giving, on pressure, the crackling sensation of parchment. On June 13 the abdomen was opened in the medium line from the umbilicum to the pubes. The sac was adherent to the parietes and to the viscera, and enucleation was therefore impossible. A quantity of ammotic fluid was withdrawn by tapping, and the opening having been enlarged with scissors, the edges of the cyst were sutured to the parietes, and a fœtus, weighing over 7 lbs., was withdrawn. The umbilical cord was ligatured close to the placenta which was left *in situ*. The cavity was washed out with antiseptic solutions and closed, a drainage tube being inserted. The temperature never rose above 39° C., and by July 10th the patient was able to leave the hospital, with an orifice 5 centimetres in diameter remaining, leading into a cavity the size of an orange, the inside of which was covered with granulations secreting little or no pus. This aperture completely healed by September 15, and the patient was shown before the Lyon Medical Society in October. She was enjoined to wear an abdominal belt in order to avert any risk of a ventral hernia. ALFRED S. GUBB.

ART. 42. *Bumm on the Ætiology of Septic Peritonitis.*—Dr. Bumm divides peritonitis into three varieties—aseptic, septic, and specific. Aseptic peritonitis arises from chemical, thermic, or mechanical irritation. It is characterised by the effusion of lymph, which tends to organise and to cause adhesions; as a rule it is circumscribed, unless the irritating agent is applied to the whole surface of the peritoneum. The third variety—specific peritonitis—may be dismissed before the second, essential to Dr. Bumm's subject is discussed. Tubercular peritonitis is the most undoubtedly specific form of peritoneal irritation. Dr. Bumm doubts the existence of a gonorrhœal peritonitis. The microbes of gonorrhœa, according to him, can only exert their morbid influence on mucous membranes, and die in serous cavities. Gonorrhœal pus escaping from a ruptured Fallopian tube, as a rule, acts only as an aseptic foreign body and becomes encysted. In the case of mixed infection, where pyogenic germs are mixed with gonococci, septic peritonitis may occur. According to our author, there are two distinct subvarieties of septic peritonitis. He terms them "streptococcus peritonitis" and "putrid peritonitis." The first sub-variety is essentially a disease of the puerperium, but may be caused by the pressing up of septic foci in the peritoneum, or by infection during operations. The disease is almost always fatal. It sets in very rapidly. The peritonitic exudation remains clear and sweet for a certain time, and during that period teems with streptococci. These organisms, when gathered from fluid in this condition, are intensely infectious. The physical signs of peritonitis at this time are little marked. Should the patient live for a few days, the peritoneum becomes injected and covered with fibrinous deposit. The fluid is now puriform, and the streptococci which it contains acts with less virulence when introduced into other organisms. When cultivated separately they also lose much of their virulence. Putrid peritonitis is the form still too familiar to operators. The peritoneal exudation is sanious and turbid from the first, It does not contain one specific micro-organism, but a mixture of germs. It is not infectious when a small quantity is introduced into the peritoneum of an animal. When germs enter the peritoneum in the course of an operation, where precautions are neglected, or where the cavity is too long exposed, they may find themselves surrounded by a favourable cultivating medium. The morbid process once established, matters go from bad to worse, and the sanious fluid which is produced becomes absorbed into the blood with disastrous results. Putrid peritonitis is developed slowly; the streptococcus variety is, on the other hand, characterised by the violent symptoms which rapidly follow its invasion.

Alban Doran.

Art. 43. *Van der Warker on Sloughing Intra-Uterine Fibroids.*—The author relates five cases, and enunciates the following rules as to treatment: (1) The use of the curette is advisable to remove the sloughing periphery of an intra-uterine fibroid when the remainder is not removable on account of complications, excessive obesity, or extreme exhaustion. (2) The process of sloughing begins at the outer layers of the mass and extends, layer by layer, into its deeper structure. (3) Rapid dilatation of the cervical canal affords ample space for the manipulations of removal; sponge tents and other slow methods of dilatation are unnecessary. (4) Fibroids, formerly intrauterine, when extruded from the uterus and pendulous in the cavity of the cervix, with the pedicle therein attached, are rarely found in a sloughing condition. (5) A form of hystero-tetanus, without trismus, may follow either certain forms of blood-poisoning or uterine lesion. (6) Blanched mucous membranes in excessive and long-continued blood-loss, due to intrauterine fibroids, afford a certain indication that the limits of safety have been reached in operative treatment of sloughing fibroids, and a doubtful prognosis must be given. (7) Septicemia, with long-continued pyrexia, is necessarily a fatal condition when due to a sloughing fibroid, unless relieved by removal of the sloughing mass. Removal, wholly or in part, is a life-saving operation, and is imperative. The operation is comparatively easy, and attended by little danger, except in cases of exsanguine mucous membranes. Alfred S. Gubb.

Ophthalmology.

RECENT PAPERS.

44. Tyson, Mr.—On a Case of Acute Glaucoma, simulating a Bilious Attack. (*Illus. Med. News*, Nov., 1889.)

Art. 44. *Tyson on a Case of Acute Glaucoma, simulating a Bilious Attack.*—Mr. Tyson records the following case:—On the evening of Feb. 16th, the author was called to see a lady, aged 64, who was suffering from severe sickness. She complained of her sight being cloudy, and of dreadful pain across the forehead. These symptoms had existed for a week. The right ocular conjunctiva was much inflamed, the pupil enlarged, and the tension of the eyeball much increased. The left eye was not at all involved. Next morning the right eye was in same condition; but all sickness had ceased. Eserine drops were ordered every night and morning. In the evening of the same day the left eye became dim; she felt sick, but was not so. On the 18th all the frontal pain had gone, the pupil of the right eye was rather contracted, and the tension normal; the left pupil was dilated, and the tension of the ball increased. The eserine was ordered for both eyes. On the 19th the tension of both eyes was normal, and the sight quite restored; there was no headache or sickness. On the 22nd both eyes were well, and in the afternoon the author performed iridectomy in the right eye. Four days afterwards she was suddenly seized with violent pain in the left eye, and sickness began. Twelve hours later the tension in the left eye was very much increased, the conjunctiva much congested, and the sight almost gone. Next day, the inflammatory state of the eye had nearly disappeared, the tension was normal, and the sight better. On the 29th, just eighty-four hours after the beginning of the attack in the left eye, an iridectomy was done. This operation did well; but in the right eye, soon after the operation, iritis sprang up, and eventually the right eye had to be removed. This case is very instructive, and might have been mistaken for an ordinary bilious attack if the author had not paid special attention to the eye symptoms, and it is most important that cases of glaucoma should be recognized as early as possible.

Richard Neale, M.D.

Laryngology & Rhinology.

RECENT PAPERS.

45. Thompson, Dr. J. A.—On a Case of Foreign Body in the Larynx (*Cincinnati Lancet-Clinic*, 4 Jan., 1890).

46. Mitchell, S., Jnr., M.D.—Perforation of the Septum. (*New York Medical Record*, Jan. 11, 1890, p. 40.)

47. Ball, James B., M.D.—Hæmatoma of Nasal Septum. (*Brit. Med. Journ.*, January 25th, 1890.)

Art. 45. *Thompson on a Case of Foreign Body in the Larynx.*—On January 28, 1889, he was called to a child who had been suffering for six weeks with some obscure form of throat trouble, which had been diagnosed as laryngeal diphtheria by the physician attending the case. The girl, about 13 years old, was anæmic, thin and weak. Local examination showed a chronic rhinitis, with offensive discharge. Both tonsils were much hypertrophied. The pharynx showed the chronic granular form of inflammation. The mucous membrane of the larynx was much inflamed. The breath was horribly offensive. A laryngoscopic examination was hard to make on account of the enlarged tonsils and narrow sensitive throat. Deep down in the sub-glottic region on the anterior wall of the larynx something could be seen that had the physical appearance of diphtheretic membrane. A solution of peroxide of hydrogen applied to it was followed by the bubbling seen when this agent is brought into contact with pus or imperfectly formed inflammatory tissue, and the whitish substance visibly decreased in size. The improvement was as rapid as it was delusive. From the first application the respiration, which had been rapid, laboured and noisy, improved. The attacks of dyspnœa grew less frequent and severe. Five days after beginning this treatment the imperfect laryngoscopic examination he was able to make showed no foreign substance in the larynx. She was given at this time chloride of ammonium for a slight bronchitis, and local treatment discontinued. She improved rapidly and continuously. with only slight attacks of dyspnœa, until March 6, when she again came under treatment. Her breath at this time was horribly offensive. The whole membrane of the upper respiratory tract showed marked chronic inflammation. Deep in the larynx, about the lower margin of the thyroid cartilage, a grayish-white body with a black tip could be seen. The nature of this substance he was unable to determine. As it was producing no dangerous symptoms at the time, he determined to treat the catarrh and wait. On March 20 he removed the larger of the two tonsils. A better view of the larynx could be obtained after this operation; but he still could not determine the nature of the mass in the larynx. Under tonics and appropriate local treatment the catarrh rapidly improved. Whenever there was a temporary exacerbation of the inflammation there would be an attack of dyspnœa, but it would disappear with the subsidence of the swelling. In the latter part of April, when the catarrh was almost well, there was a return of the violent attacks of dyspnœa. They became so severe as almost to threaten life. Then he was told, for the first time, that about the 15th of December the child, after eating some oyster soup, complained that she had swallowed a piece of shell. The object in the larynx was too low to be safely reached by forceps. To clear up all doubt in the case, he proposed a laryngotomy. While her friends were debating the advisability of consenting to the operation, the matter was settled, May 15, by her coughing out a piece of oyster shell that had been in the larynx certainly for ten weeks, probably for four months. An ulcer in the median line, involving the crico-thyroid membrane, showed where it had been lodged. It healed rapidly under insufflations of iodoform.

ART. 46. *Mitchell on Perforation of the Septum.*—The author, in a short paper, affirms that many cases of ulceration and perforation of the cartilaginous portion of the septum occur that are entirely independent of any syphilitic disease, but are induced by the patients themselves. He has noticed that perforation of the septum in its cartilaginous portions is most frequently found in thin-featured people, where the lateral cartilages that should present convex surfaces outward, thus giving free open nares, are reversed by a collapse of their cartilages, thus bringing their convex surfaces toward the septum. The constant contact of the surfaces thus induced creates a feeling of obstruction that the sufferer seeks to remove by frequently introducing the finger into the nostrils. The result is the septum is injured by the sharp finger nail, a crust forms at the seat of the injury, which is torn away by the sufferer as often as it reforms, thus giving great relief (to his mind), but inflicting upon the septum each time a deeper injury, that finally terminates in a perforation of this thin partition, with ulcerated edges, and becomes a source of pain and anoyance until the edges are healed. When once healed there is great relief from the feeling and obstruction. A case is cited which bears out this view. Despite warning, the patient continued to use his finger nail to the septum, until a large perforation had formed. In treatment the author removed all the crusts and prepared a thin pledget of corten, exactly filling the opening in the septum, smeared it thoroughly with ung. hydras. nitratis dil., and placed it in the opening, with directions to allow it to remain for 24 hours. The pain diminished, breathing through the nose became freer, and upon removing the corten at the end of the time above mentioned rapid healing was found to be in progress. This treatment was continued for about two weeks, when the healing became complete.

ART. 47. *Ball on Hæmatoma of Nasal Septum.*—The case was that of a boy, aged 7, who was brought to the hospital, said to be suffering from polypus of the nose. The nose was much enlarged, due to the cavity of each nostril being occupied by a smooth reddish tumour, which protruded beyond the orifice, completely secluding the passage and pressing out the ala on each side. The tumours were nearly symmetrical. They had a soft fluctuating hue, and could be seen to merge in the septum just above the columna. No fluctuation could be made out, and no pain or tenderness. Three weeks previously the boy had fallen on his nose, which was followed by some epistaxis. A few days afterwards the swellings were noticed, and they gradually increased till the date of his coming to the hospital. The patient was kept in bed for a few days and an evoporating lotion applied. Rapid subsidence of the swellings ensued.

H. PERCY DUNN.

Pathology.

48. NAUWERCK AND BARTH.—On the Pathological Anatomy of Landry's Paralysis. (*Deutsche Med. Zeitung*, 1890, No. 2.)

49. WEST, S. M.D.—Thrombosis of Portal Vein with Suppurative Peritonitis. (*Brit. Med. Journ.*, January 25th, 1890.)

ART. 48. *Nauwerck and Barth on the Pathological Anatomy of Landry's Paralysis.*—A young woman, aged 20, suffered subacutely, first from pains in the legs, then from severe motor paralysis, first in the legs, then in the trunk, and finally in the arms. During the course of the disease—twelve weeks—there was no atrophy, and the electro-muscular excitability was normal. There were only slight sensory disturbances, and they remained slight. Reflexes in the lower limbs. The sphincters acted normally; no decubitus, no trophic disturbances. After slight improvement of the paralysis acute bulbar paralysis set in unexpectedly and caused sudden death. No disturbance of speech, swallowing, or breathing had been remarked. The patient had also incipient pulmonary tuberculosis. The *autopsy* showed caseous centres in the lungs, swelling of the spleen, &c. The central nervous system showed no essential alteration from the normal. Microscopic examination of the spinal cord and medulla oblongata gave a perfectly negative result. But the nerves of the cauda equina showed intestitial neuritis in high degree, with pronounced disappearance of nerve-fibres. The sciatic nerves participated, though to less extent. In the lumbar region the anterior and posterior roots showed neuritic changes, which were also present, though in less degree, in the roots of the dorsal and cervical regions. The roots of the bulbar nerves, also the nerves of the upper arm, were not apparently affected. The paralysed muscles showed nothing abnormal on section. *Remarks.*—The absence of atrophy and of the reaction of degeneration during life is explained by the fact that the separate nerve-bundles were equally intensively affected, so that the muscles remained in connection with their trophic centre in the spinal cord. The paralysis of the arms is not explained by the relatively insignificant disease of the anterior roots, nor is the sudden death, in the absence of demonstrable participation of the bulbar nerves. But the author, nevertheless, thinks himself justified, by analogy with the neuritis of the lower limbs, in assuming that the seat of the disease, even here, was in the peripheral nervous system. There must have been some functional disturbance in the conducting paths, for which anatomical alterations were wanting, or else were not revealed by our method of examination. In this case, again, Laudry's paralysis, especially when the enlarged spleen is considered, appears, in all probability, as an infectious disease. Following Rosenstein (*Deutsche Med. Zeitung*, 1888, p. 499), the author thinks an auto-intoxication—from tissue-products due to microbes—proceeded from the tuberculous lungs, which at first abated and then suddenly caused death by intensely affecting the bulbar nerves. Other anatomical investigations and clinical histories support the theory that Landry's paralysis is a multiple neuritis, a theory which this case appears to confirm.

Art. 49. *West on Thrombosis of Portal Vein with Suppurative Peritonitis.*—The author gives the following details of a case of thrombosis of the portal vein, the result of suppurative peritonitis in the course of gastric ulcer. The patient, a young woman, aged 22, had had gastric ulcers for some years, and was seized with severe pain in the left side. She gradually got worse, and a week later was thought to have peritonitis. She never had marked abdominal symptoms, and after a few days seemed to develop an empty ema, a diagnosis which was confirmed when she began to spit pus. On exploration, a few drachms of pus were obtained from the left side. The *post-mortem* showed suppurative peritonitis and an old gastric ulcer, which, however, seemed so deeply imbeded in fibrous tissue that it seemed unlikely that any recent communication could havo existed with the peritoneum. The left pleura was free from pus, but there was a profuse broncho-blenorrhœ of the left side only, which accounted for the pus in the sputum. The portal vein was completely filled with an old decolorised adherent clot, and contained no blood, while the branches in the liver were so completely filled with pus that on section they looked like abscesses. There was no ascites, neither were there any hepatic symptoms.

H. Percy Dunn.

Physiology.

50. Koenig, Dr.—On the Perception of Colours (*Berlin klin. Wochsenschr.*, No. 33, 1889).

Art. 50. *Koenig on the Perception of Colours.*—The theory of Young, also called the Young-Helmboltz theory, is well known, viz., that the retina possesses distinct sensory nerve-elements for each of the three fundamental colours—red, green and blue. Herr Koenig (Berlin) recently mentioned, at a meeting of the Charité Dertyle, two cases which opposed this theory. One was a case of "mental blindness," brought forward by Oppenheim, and the patient, who had previously seen things in their natural colours, now saw all objects as black, grey, or white. According to the theory of Young, they shonld have been seen in one or other of the three colours, red, green and blue, perhaps in two of them. In the next case, a well-educated person, with good colour perception, had a detachment of the retina; this was followed by replacement, or rather reunion, and he recovered with visual power-1/20, but was monochromatic, and, as in the above case, in the scale of black, grey, and white. It is only these cases of monchromasia which are acquired, which can be utilized in this way; from the congenital kind of which Koenig had seen a case, nothing, of course, can be learnt .(*Berliner klin Wochenschr*, No. 33, 1889.)

E. J. Edwardes, M.D.

Bacteriology.

Art. 51. *Gebhard on the Effect of Dilution on the Virulence of the Milk of Tuberculous Cows.*—In the *Jour. of Compar. Path. and Therapeutics*, December 1889, p. 357, an abstract is given of some experiments carried out by Gebhard under the direction of Prof. Bollinger, to show the effect of dilution on the activity of the tubercular virus. Milk taken directly from the udder of tuberculous cows completely loses its virulence when diluted from 40 to 100 times. Thus tubercular milk when mixed with a certain proportion of non-tubercular milk will lose its infective properties, and the danger of such milk is diminished by mixing it with the milk of all the cows in the same stock which are not tuberculous. Apart from the favourable effect of cooking, the practice of diluting the milk of children will lessen the danger of infection. The practice of using warm milk from a single cow ought to be discarded. As regards the mode of infection, the subcutaneous tissue, the peritoneum, and the lungs appeared specially predisposed. That there exists individual predisposition was shown by the fact that a pure culture diluted 200,000 times gave a negative result in some guinea-pigs, whereas in others a dilution of 1 in 400,000 produced tuberculosis.

Diseases of Children.

RECENT PAPERS.

52. Duke, Dr. Alexander.—On Resuscitation of Asphyxiated Infants. (*Med. Press and Circular*, 1889.)

Art. 52. *Duke on Resuscitation of Asphyxiated Infants.*—As an addition to the plans in general use for the resuscitation of an asphyxiated infant, Dr. Duke suggests the following method, which is both simple and effective in all cases where the heart beat can be heard. Directly the infant is born, without any signs of life, the nurse is directed to take charge of the uterus, and he thus proceeds:—If the funis be pulsating strongly, he waits till this has almost ceased and then divides it. He then raises the limp and flaccid body of the infant, and turning it face downward, with arms and legs pendant, allows the thorax alone to rest across the open palm of his left hand, and at intervals of five seconds he compresses the ribs with his hand, as one would work a rubber syringe. While his left hand is thus fully occupied, the position of the head allowing the tongue to fall forward and facilitate the escape of mucus from the mouth, he cleanses the lips of the infant with a napkin held in his right, and inserts his index finger well into the pharynx so as to establish the "atmospheric highway." He then changes the child to his right hand, so that the tips of his fingers, resting near the heart, will at once detect any improvement in its action. If he does not find this satisfactory he plunges the child into a large basin of hot water, rubbing the chest and back vigorously, the latter being the more important, as the friction to the spine stimulates the respiratory powers, and a little spirit poured over the back by the nurse and well rubbed in is also efficacious (in conjunction, of course, with the artificial respiration which has been kept up as regularly as possible). He mentions that some years ago, while assistant master at the Rotunda Hospital, he was called to a case of *post-partum* hæmorrhage, and having attended to this, which took some considerable time, he inquired where the infant was, and was told it was still-born. He found it under the bed with a heap of soiled linen. Fortunately, the heart still beating, though very feebly. By adopting the above treatment he had the satisfaction of saving the infant's life, much to the disgust both of the mother and friends, who had evidently intended it should not live. In conjunction with the treatment before enumerated, he has sometimes found it advantageous to suspend the infant by the legs downwards with back close to fire, keeping up respiration with the free hand. It is most important that the infant should respire fully and shout lustily, so as to fill the lungs with air. The disregard of this measure frequently give rise to what is known as atelectasis, which defect in the respiratory function lasts through life.

Alfred S. Gubb.

The Epidemic of Influenza.—The German and Prussian Ministries have ordered a thorough inquiry into the epidemic. The investigations instituted by the Berlin physicians promise great success, as they are being carried on upon a very extensive scale, and and are, in fact, of an international character. In Italy, the epidemic, though mild in form, is spreading rapidly, and the Communal Council of Rome has made a grant of 50,000 francs for preparing a lazzaretto in some unoccupied school buildings, owing to the fact that the hospitals are now crowded. There are a good many cases at Alexandria, and though the malady is of a mild form, it seems to have effected the death-rate, which in Cairo is 56 and in Alexandria 48 per 1,000, as against 43 and 41 respectively in January last year. The rise is mainly due to diseases of the respiratory organs. Intelligence from Mexico reports that the malady is increasing in that country. In some cases it is followed by pleurisy, and many deaths are attributed to it.

CONCLUSION OF THE HYDERABAD CHLOROFORM COMMISSION.

In the *Lancet* of Jan. 18 was published the text of the report of the Hyderabad Chloroform Commission, which comprises Messrs. Edward Lawrie, T. Lauder Brunton, G. Bomford, Rustomji D. Hakim, and Edward Lawrie, sen.

The following are the practical conclusions which the Commission think may fairly be deduced from the experiments recorded in this report:—

I. The recumbent position on the back and absolute freedom of respiration are essential.

II. If during an operation the recumbent position on the back cannot, from any cause, be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration, the patient should be at once restored to the recumbent position on the back.

III. To ensure absolute freedom of respiration, tight clothing of every kind, either on the neck, chest or abdomen, is to be strictly avoided, and no assistance or bystanders should be allowed to exert pressure on any part of the patient's thorax or abdomen, even though the patient be struggling violently. If struggling does occur, it is always possible to hold the patient down by pressure on the shoulders, pelvis, or legs without doing anything which can by any possibility interfere with the free movements of respiration.

IV. An apparatus is not essential, and ought not to be used, as, being made to fit the face, it must tend to produce a certain amount of asphyxia. Moreover, it is apt to take up part of the attention which is required elsewhere. In short, no matter how it is made, it introduces an element of danger into the administration. A convenient form of inhaler is an open cone or cap, with a little absorbent cotton inside at the apex.

V. At the commencement of inhalation care should be taken, by not holding the cap too close over the mouth and nose, to avoid exciting, struggling, or holding the breath. If struggling or holding the breath do occur, great care is necessary to avoid an overdose during the deep inspirations which follow. When quiet breathing is ensured, as the patient begins to go over, there is no reason why the inhaler should not be applied close to the face; and all that is then necessary is to watch the cornea and to see that the respiration is not interfered with.

VI. In children, crying ensures free admission of chloroform into the lungs; but as struggling and holding the breath can hardly be avoided, and one or two whiffs of chloroform may be sufficient to produce complete insensibility, they should always be allowed to inhale a little fresh air during the first deep inspirations which follow. In any struggling persons, but especially in children, it is essential to remove the inhaler after the first or second deep inspiration, as enough chloroform may have been inhaled to produce deep anæsthesia, and this may only appear; or may deepen, after the chloroform is stopped (*vide supra* sub-paragraphs 2 and 9 of conclusions in paragraph 30). Struggling is best avoided in adults by making them blow out hard after each inspiration during the inhalation.

VII. The patient is, as a rule, anæsthetised and ready for the operation to be commenced, when unconscious winking is no longer produced by touching the surface of the eye with the tip of the finger. The anæsthetic should never under any circumstances be pushed till the respiration stops; but when once the cornea is insensitive, the patient should be kept gently under by occasional inhalations, and not be allowed to come out and renew the stage of struggling and resistance.

VIII. As a rule, no operation should be commenced until the patient is fully under the influence of the anæsthetic, so as to avoid all chance of death from surgical shock or fright.

IX. The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anæsthesia, is to see that the respiration is not interfered with.

X. If possible, the patient's chest and abdomen should be exposed during chloroform inhalation, so that the respiratory movements can be seen by the administrator. If anything interferes with the respiration in any way, however slightly, even if this occurs at the very commencement of the administration, if breath is held, or if there is stertor, the inhalation should be stopped until the breathing is natural again. This may sometimes create delay and inconvenience with inexperienced administrators, but experience will make any administrator so familiar with the respiratory functions under chloroform that he will in a short time know almost by intuition whether anything is going wrong, and be able to put it right without delay before any danger arises.

XI. If the breathing becomes embarrassed, the lower jaw should be pulled, or pushed from behind the angles, forward, so that the lower teeth protrude in front of the upper. This raises the epiglottis and frees the larynx. At the same time it is well to assist the respiration artificially until the embarrassment passes off.

XII. If by any accident the respiration stops, artifical respiration should be commenced at once, while an assistant lowers the head and draws forward the tongue with catch-forceps, by Howard's method, assisted by compression and relaxation of the thoracic walls. Artificial respiration should be continued until there is no doubt whatever that natural respiration is completely re-established.

XIII. A small dose of morphia may be injected subcutaneously before chloroform inhalation, as it helps to keep the patient in a state of anæsthesia in prolonged operations. There is nothing to show that atropine does any good in connexion with the administration of chloroform, and it may do a very great deal of harm.

XIV. Alcohol may be given with advantage before operations under chloroform, provided it does not cause excitement, and merely has the effect of giving a patient confidence and steadying the circulation.

35. The Commission has no doubt whatever that, if the above rules be followed, chloroform may be given in any case requiring an operation with perfect ease and absolute safety so as to do good without the risk of evil.

Toxicology & Medical Jurisprudence.

RECENT PAPERS.

53. ANDERSON, Dr.—On a Case of Fatal Poisoning by Chlorate of Potash (*New York Med. Rec.*, Dec. 1889).

54. CROSSLAND, Dr.—On a Case of Poisoning by Coal Gas.

55. RUCHMANN and MALACHKOWSKI.—On the Treatment of Iodism.—(*Therap. Monat.*, Dec. 1889.)

56. MCPHEDRAN, Dr.—On a Case of Multiple Neuritis from Arsenical Poisoning.

57. MACKENZIE, Dr.—On a Case of Rupture of the Right Phrenic Nerve, proving instantly fatal.

58. REESE, Dr.—On the Post Mortem Imbibition of Poisons.

ART. 53. *Anderson on a Case of Fatal Poisoning by Chlorate of Potash.*—Dr. Anderson records the case of an old lady, aged 70, in fair health, who took nearly an ounce of chlorate of potash in water, and drank it all, thinking it was Rochelle Salts. Two hours afterwards the patient found out her mistake and sent for the author, who thought only about two drachms had been swallowed, and gave a favourable prognosis. A dose of castor-oil was given, and followed by a dose of bismuth. Four hours later the author was again sent for, and found the patient in a state of collapse; the temperature was 100° F. and the pulse 100, very weak, but regular. A small dose of digitalis with whiskey was ordered to be given frequently. She remained quiet and free from pain after this, but died comatose early the next morning evidently from heart failure. She passed urine after taking the medicine, and she vomited a quantity of mucus after rallying from her collapse in the evening, with no sign of blood in the discharge.

RICHARD NEALE, M.D.

ART. 54. *Crossland on a Case of Poisoning by Coal Gas.*—A young woman went to bed one evening, and, through ignorance, blew the gas out. At 5 a.m. the following morning she was called and was found in a comatose state; her respiration was sterterous, shallow and abounding in mucous râles; pulse just perceptible; eyes open, fixed pupils, moderately dilated and insensible to light; face and extremities livid; body-surface cold. Free ventilation and the hypodermic injection of stimulants having failed to restore her, 15 minims of a 1 per cent. solution of nitro-glycerine solution were injected in the region of the epigastrium. The good effects of this were soon visible in the improved character of the heart's action. This was repeated at intervals of about two hours, and some nine hours after treatment was commenced she appeared to be in a hopeless state of collapse; the dose of nitro-glycerine was increased, and artificial respiration by means of faradisation of the phrenics resorted to. This was kept up for an hour, at the end of which time she was decidedly better. From this time she continued to improve, but it was not until after twenty-two hours of assiduous treatment that she could be considered out of danger.

ART. 55. *Ruchmann and Malachkowski on the Treatment of Iodism.*—The authors regard the intense irritation of the mucous membranes, which so frequently follows the administration of small as well as large doses of iodine, as due to the presence of free iodine in the system. They hold that for this to take place nitrites must be circulating in the organism, and that the reaction of the mucous membranes should not be alkaline. Hence, the authors' attempt, by administering 150 to 180 grains bicarbonate of soda in two doses daily, to render the mucous membrane alkaline. By this treatment, pursued since 1887, they claim to have succeeded not only in ameliorating the most intense iodic irritations, but in removing the milder ones entirely.

Art. 56. *McPhedran on a Case of Multiple Neuritis from Arsenical Poisoning.*—Thos. S., æt 58; no occupation; personal and family history good. In April, 1889, a tumour appeared behind the ramus of the jaw, on the left side. It grew rapidly, and early in May was as large as a hen's egg. He consulted a so-called "cancer doctor," who applied a plaster, leaving it on for two days, and then a poultice for two more, and so on for about two weeks. These applications caused great pain. In the course of a fortnight he found his legs becoming stiff and numb, with painful sensations, and he was soon unable to walk. The hands then became affected, and he soon become unable to feed himself. He was admitted into the Toronto General Hospital on June 29, 1889. The legs were then almost completely paralyzed; the muscles being wasted and soft. He complained of great pain in the legs and feet, especially at night; an opiate being necessary to secure sleep. Tactile anæsthesia was marked, but they were acutely sensitive to certain stimuli, as: when the finger nail was drawn along the sole of the foot, or when the muscles of the calf were pinched. Cold was easily perceived, but heat only when great, and then gave the sensation of cold. Knee-jerk and other muscle reflexes were absent; likewise superficial reflexes. With the eyes closed he was not conscious of the position of the legs. To the faradic current there was no response in the feet or legs, and only a weak contraction in the thighs; none also in forearms and hands. There was no wasting of forearms and hands, but much anæsthesia and weakness, with some inco-ordination. He could not pick up small objects without looking to see if had hold of them. The skin everywhere was dry and showed a tendency to desquamate; the soles of the feet were scaling very freely. He said he had had no rash. The legs were deeply pigmented. There were no bladder or bowel symptoms. Appetite and general nutrition were fair. On the left side of the neck, below the ear, was a circular slough 1½ inches in diameter; it was beginning to separate. He was given ʒss daily of potassium iodide, and the bowels kept open by salines. He slowly improved, and was able to stand alone by September. At the end of the year he was able to walk a little, but, chiefly on account of the anæsthesia, he still needed the aid of his eyes to enable him to maintain his equilibrium. The calf-muscles had regained their normal size, and he could easily tell the position of the legs. The extensor muscles were still weak. The anæsthesia of the hands persisted, and he could not pick up small objects without looking at them. Reflexes still absent. Subsequent examination showed that the symptoms were referable to chronic arsenical poisoning, and the author regrets that the urine was not examined for the presence of arsenic.

Alfred S. Gubb.

Art. 57. *Mackenzie on a Case of Rupture of the Right Phrenic Nerve proving instantly fatal.*—A native coolie or porter, whilst carrying a bag of tamarind fruit from the river side to a boat on the bank, slipped and fell on his back with the bag on the front of his chest. His fellow-labourer picked him up at once but found that he was dead. On examination of the body the only injury which could be detected was a rupture of the right phrenic nerve in front of the root of the right lung. The lungs were highly congested; the heart was healthy; the other viscera were natural. In seven other cases Dr. Mackenzie has met with sudden death ftom occurence of precisely similar accidents: in five of them the cause of death was fracture of one or more of the cervical vertebra, with injury to the spinal cord, and in the remaining two death was due to shock consequent on fracture of the sternum.

Art. 58. *The Post-Mortem Imbibition of Poisons.* By Prof. Reese.—In a paper read before the Med. Juris. Soc. of Philadelphia, Prof. Reese, after alluding to recent experimental researches, states that it may be accepted as a fact that all poisons, organic as well as mineral—at least, all those susceptible of solution—do undergo the process of imbibition or transfusion into the various organs and tissues of a dead body, and that in every criminal trial for poisoning this important fact should be borne in mind for the benefit of the accused. The question, therefore, arises whether there are any means by which, in the case of death from alleged criminal poisoning, we can positively discriminate between the poison administered before death and that which may have been injected into the body designedly after death. Prof. Reese holds that the answer to such a question cannot be given by chemistry alone, since the results of a purely chemical analysis must be the same in both cases. The first point to be attended to is, that in the case of poisoning, where the poison has reached the various organs by means of the blood vessels during life, the interior of the organ will contain quite as much of the poison as the exterior, while in *post-mortem* imbibition, the exterior of the organ would be more affected than its interior. Again, it is probable that histological and pathological changes, recognisable only by the aid of the microscope, would be found in the various viscera as a result of *ante-mortem* poisoning, whilst no such changes would result from mere transudation after death. Another factor in diagnosis is the examination of the urine during life in a suspicious case, which should never be neglected. An examination made after death, especially long after death, does not give evidence that can be relied upon, as the poison may penetrate the bladder by imbibition. After all, very frequently in these cases the attendant circumstances have to be relied upon for a proof of a crime, the symptoms manifested by the deceased being the most important of these, but they have seldom more value than as being highly suggestive, and cannot be regarded as affording absolute proof. Other important circumstances are a motive for murder on the part of some one, *e.g.*, a life insurance claim, and the possession of the actual poison used by a suspected person. The paper concludes with a strong plea for State interference to check the promiscous embalming of bodies, by which means there are very strong grounds for believing a crime has been on more than one occasion successfully concealed.

Art. 59. *Sheffield Water and Lead Poisoning.*—After the report of Dr. Sinclair White, then medical officer of health for the borough of Sheffield, that lead poisoning was very prevalent and that it was directly traceable to the water supply, there was much temporary excitement, but nothng was done, and things were allowed to go on much as before. Since then the water supply has ceased to be the property of a private company, and is now owned by and under the control of the town council. It would be not unnatural to suppose that this body would have seized the firs opportunity of dealing promptly with so great anevil as an impure water supply, but the only step so far taken has been to pass a resolution ordering the engineer to make an inquiry. The local papers have taken the matter more seriously in hand, and they will, we hope, succeed in bringing about a speedy and efficient reform. The special commissioner who has been making some investigations on behalf of one of the papers has published a series of articles embodying the facts he has been able to ascertain. Naturally he found some difficulty in obtaining details of the cases, for medical men are at all times chary of giving much information respecting their patients to writers in the public press, and rightly so; but from the hospitals and elsewhere he has compiled a table of 127 cases of lead poisoning, nearly all of which occurred during the year 1889, none of the sufferers being in any way exposed to the influence of lead in their trades or occupations. In only one case did a fatal result ensue, but in many the damage done will be permanent in the shape of wrist-drop and other nervous manifestations, whilst even the more fortunate ones have been subjected to a tedious and oftentimes very painful illness. The fatal case was particularly sad. The patient was a young woman in domestic service who was obliged to give up her situation to nurse her mother at home. The mother, be it noted, was suffering from lead poisoning. The girl soon became affected with lead poisoning also, and after a prolonged illness, varied by temporary improvement when she was sent away for change of air, she died in the autumn in the hospital, her death being certified as due to lead poisoning. The water supplied to the house where she and her mother lived was analysed and found to contain dangerous quantities of lead. Of course, it is very easy to say that people should not use service pipes made of lead, but the majority of the poor cannot afford to replace them with any other material, nor can they afford to buy filters, and in our opinion it behoves the town council to make a serious effort to find some plan by which they may arrest the solvent action of the water on lead before it is delivered to the consumer.

Reviews.

Article 60.

Old Age: the Results of Information received respecting nearly Nine Hundred Persons who had attained the Age of Eighty Years, including Seventy-four Centenarians. By G. M. Humphrey, F.R.C.S., F.R.S. 1889. Macmillan & Bowes, Cambridge.

It is not often that we find a work so full of interesting, strange, and sometimes startling results from what might have been a dry, statistical inquiry. Professor Humphrey is to be congratulated on his labours, and those who are acquainted with his teaching and writing will recognise the thoroughness, force, and attractive clearness of the author. He has utilised a large amount of material which the collective investigation system of the British Medical Association has enabled him to put together. Only those who have had to do with such work fully appreciate the labour involved in this. And though we possess the conclusions which men of such large experience as Sir James Paget have given us of the influence they have noticed of old age on the system, with reference to various pathological processes, yet such an extended inquiry as the present shows this, perhaps, more clearly and impressively to the reader than any recorded impressions, because we can test the conclusions ourselves. We have here facts which are more interesting to the present scientific inquirer than even Cicero's charming discourse on old age to the school-boy—which is, perhaps, not saying much—or to the old student—which, however, is saying a good deal; and many an old man or woman will find from this work that he or she is a subject of great intsrest.

Besides the well-known address of the author before the Medical Society of London, the work contains carefully prepared analyses of the returns of centenarians and old people above eighty years of age, their present condition, their past life-history, maladies, and the *post-mortem* examination of one. There are plates also depicting the changes occurring in the femur and the jaw; and the frontispiece is of a wonderful married couple, each aged at the time a hundred and one years.

Looking now at some of the results of the inquiry, we find, rather contrary to general impressions—though insurance offices are quite aware of the fact—that female life is longer than male life, for only ten males out of eighty-nine centenarians are in the Registrar-General's report. Another point of great interest is, that phthisis occurred in some of the immediate relations in sixteen per cent. of the cases; in some it was reported as having occurred in both parents. Many of the centenarians were the eldest children of the family, some were twins, most were temperate but not total abstainers, small meat eaters and not troubled with indigestion; and there does not appear to be any great difference between the well-to-do and the poorer classes—out of about fifty centenarians thirty were comfortably off and twenty poor. It is encouraging to notice some of the startling accounts of past and present illnesses. Though the majority had suffered little from illness at former periods, yet it makes treatment hopeful when we find such a record as this. Of the centenarians one had been epileptic from 17 to 70; one was ten years in an asylum after a confinement; one had had a "bad stroke" at 60 and two less serious ones at 70; one had renal dropsy at 82 lasting two years; one had renal disease with loss of sight at 30; one was bedridden from debility for two years between 60 and 70; one had typhoid fever severely between 50 and 60; one had paralysis when a child; another had rheumatic fever at 70; others had had severe bronchitis at 82, paralysis at 90, abscess connected with the spine and stiff knee from injury at 50, with diarrhœa from 70 to 75; another had gall stones at 60; another fever at 25, also jaundice and small pox; another rheumatic fever when young and rheumatism afterwards, and others had recovered from severe attacks of bronchitis in old age. Of those who had recovered from illness at great age the most remarkable are these: From renal dropsy at 82, which lasted two years, and the same case recovered from a large slough at 98 and another from acute bronchitis at 95, and pneumonia and erysipelas of the head at 99; others from rheumatic fever at 70, from severe bronchitis at 82, from severe fever at 84. Six had suffered injury to the hip after the age of 90; one broke the neck of the femur at 90 and one at 101, the latter so far recovering as to go on crutches.

These facts, however much they may have to be discounted by critical examination of the grounds for the diagnosis, are of very great importance, for they show what great recovering power there may be in the aged and they show, too, that (if they are correctly diagnosed) many diseases which we are inclined to despair of are no real bar to a long life. It has long been recognised that the repair of wounds often takes place very evenly on the aged, when otherwise healing and even fractured bones, when they can be kept in position with satisfaction, and the words here given bear out these conclusions. But it will be surprising to many to find that in only 11 out of 340 returns of men between 80 and 90, and in only one out of the 92 returns between 90 and 100 is prostatic disease said to have existed, and these results appear to confirm the opinion that age gives a gradually increasing exemption from this troublesome and serious malady. In women the brain seems to give way oftener than in men, but women's recovery from brain affections was remarkable. Thus 25 cases were given in which brain attacks associated with paralysis, in most instances hemiplegia, and in some also with convulsions and loss of consciousness were, more or less, recovered from.

These few extracts and summaries will show that in the work now issued we have a mine of information unsuspected by most people. Doubtless the records will be yet extended, but the conclusions arrived at will probably not be materially affected, and the student of senile changes will be grateful to Professor Humphrey for his labours. The profession generally, too, will welcome this useful book of reference on an important and interesting subject, for hitherto they have only had the general conclusions of surgeons and of observers of large experience, without being able to refer to the material from which those conclusions were drawn. We would make one suggestion for any future edition, and that is, that the "further report of centenarians" should be incorporated with the earlier report, and the deductions drawn from the whole. And it would be of interest to have the geographical distribution of old age pointed out, without wading through the actual returns in this "Collective Investigation Record."

W. W. WAGSTAFFE.

ARTICLE 61.

On Tension in Surgical Practice, Inflammation of Bone and Cranial Injuries. By THOS. BRYANT, F.R.C.S., being the Hunterian Lectures, 1888. London: J. & A. Churchill, 1888.

THERE is no doubt that the subject here discussed is one of paramount importance in surgery, and the author considers it from the clinical and practical point of view, as we should expect. The term tension is no doubt of modern use, and we are accustomed now to hear of arterial and muscular and other tension more commonly in the description of symptoms and cases, but we can hardly over-estimate the importance of it as a result of pressure. The author considers it as being brought about by cystic or solid growths, by extravasation of blood, and by inflammatory effusion on the different tissues and structures. The causes effects, symptoms and treatment are, of course, described, and we may call attention to only a few of the many points here noticed. The value of local pain as a clinical sign of tension, and the expediency of relieving tension as speedily as possible, the greater use of leeches and venesection than is generally adopted, the example of the effects of tension in bone and joint disease, the importance of early incising, drilling and trephining in inflammatory tension in bone, and, finally, the symptoms and effects of tension in cranial and intra-cranial injuries are noticed. He quotes the recent observations of Mr. Jacobson, on middle meningeal hemorrhage, which are likely to be of great value to the surgeon. By the careful record of cases we are likely to come to a better knowledge of the symptoms of this important class of cases, and with better knowledge we may hope to cure and relieve a much larger number of cases. Cranial surgery has made such strides of late years that we shall not be content to leave intra-cranial tension from hemorrhage as only a necessarily fatal condition, for which the *post-mortem* examination is the only operation.

Mr Bryant gives a large number of clinical cases in illustration of his remarks, and there are some of them of much interest, and all are useful additions to our knowledge. But we find no attempt at anything beyond clinical observations, and must look to the future for any experimental inquiry on the effects of proportionate tension on the different tissues, and other points which this subject suggests. These lectures will, however, be read with interest by surgeons, and the advice of so practical a worker and teacher as the author will be read with advantage by the profession on this common but important pathological condition.

W. W. WAGSTAFFE.

ARTICLE 62.

Insomnia and its Therapeutics. By A. W. MACFARLANE, M.D., F.R.C.P., Ed., &c., &c. London: H. K. Lewis. 1890.

A TREATISE on sleep and its disorders always has a charm for the post-graduate student, and, when skilfully handled, the subject is one which lends itself admirably to the philosophical therapeutist. Insomnia is a symptom of, or is associated with, so many disorders that the size of the volume now before us excites neither surprise nor dismay, particularly in view of the fact that it is beautifully printed in bold type, *ce qui ne gâte rien à la chose.* The work begins, as a matter of course, with a dissertation on the physiology of sleep. This, however, starts by a candid admission that while many interesting theories have been advanced to interpret this phenomenon, the wonderfulness of which familiarity alone prevents our appreciating, no one of them is as yet recognised as affording a satisfactory or final solution of the changes that distinguish a brain awake from one asleep or functionally tranquil. Nevertheless, if the mechanism escapes us, the researches of the last thirty or forty years have done much to acquaint us with the nature of the modifications which occur during sleep, and they may, moreover, serve to indicate the character of the various pathological conditions which give rise to insomnia. This chapter scarcely calls for remark beyond saying that it gives a succinct account of facts observed bearing on the attitude of the nervous system in sleep and analogous conditions, such as somnambulism, hypnotism, &c. The author then passes on to discuss the diagnostic and pathological significance of insomnia, and the general conditions which influence sleep and sleeplessness. This chapter is as interesting and instructive as any in the book, since it initiates the reader into the manifold circumstances which underlie departure from the normal, all of which must of necessity be borne in mind when considering the all-important problem of treatment. It is obviously impossible, in dealing with such a subject, to avoid an occasional poetical quotation; but the author has shown a wise discretion in curbing the almost irrepressible tendency to introduce poetical sentiment into a purely scientific treatise. With reference to hypnotics the author shows himself open-minded and far from the intolerance which characterises the dogmatic utterances of some who have written on the subject. He fully recognises the value of alcohol, judiciously administered, in the production of sleep, and even declares it to be "one of the most reliable and least hurtful hypnotics we possess." He is well abreast of recent advances in hypnotic materia medica, and speaks highly of some of the drugs lately issued from the chemists' laboratory, notably sulphonal, chloral-amide, and paraldehyde, though he is careful to add that none of them have been found free from objection, albeit very superior, in many respects, to the bulk of the older remedies. Being of a sanguine temperament he "confidently looks forward to the fabrication of one (new compound) which will safely and benignly induce sleep." Like alcohol in disease, hypnotics are remedies which it is easy to misuse. They are essentially intended to combat ephemeral conditions, and if used with any other object, then the penalty will not be long in coming. Space forbids a detailed analysis of the very admirable chapters treating of insomnia dependent upon affections of the nervous system and alimentary canal, great as is the temptation to do so. They are replete with interest, and may be profitably perused by those who seek to gain a deeper insight into the recondite phenomena of this distressing, but often avoidable or curable, condition. The concluding chapters carry us on to the consideration of the causes allied to the other systems and peculiar to females, winding up with a few remarks on the sedative effects of baths and electricity. ALFRED S. GUBB.

ARTICLE 63.

A Treatise on Materia Medica, Pharmacology, and Therapeutics. By JOHN V. SHOEMAKER, M.A., M.D., Professor of Materia Medica, Pharmacology, and Therapeutics in the Medico-Chirurgical College of Philadelphia, and JOHN AULDE, M.D. (vol. I.) F. A. Davis, Philadelphia and London, 119, Oxford Street, W. 1889.

THIS, the first of two volumes, is devoted to pharmacy, general pharmacology, and therapeutics, and remedial agents not properly classed with drugs, the latter comprising electro-therapeutics, hydro-therapeutics, masso-therapeutics, balneo-therapeutics, and such general methods of treatment as climatology, hypnotism, &c., &c. One turns with some curiosity to the preface to see on what grounds the authors justify an addition to the already overwhelming library of works on these and cognate subjects, and there we find a programme which, if adhered to, would fully reconcile us to their undertaking. A new work on therapeutics, we are told, must cut loose from the traditional heresies that have been handed down from time immemorial, without condemning as obsolete empirical methods which have shown their value in times gone by. The authors deprecate the department of research which they qualify as "experimental toxicology," and they opine that little is to be gained by the needless repetition of well-established operations requiring lethal doses of drugs whose physiological action is thoroughly understood. Ay, there's the rub! What are, then, the drugs the action of which is "thoroughly understood"? The authors do not commit themselves to a list of them, or we might be tempted to join issue forthwith.

No exception can be taken to the oft-reiterated observation that a knowledge of the action of drugs in health affords but little assistance in determining what it is likely to be in disease. Observation and experience are doubtless more reliable guides, humiliating as such a confession must be to the scientific therapeutist. The febrile activity of the last few years in the discovery and introduction of new drugs has resulted in such a copious literature, comprising opinions so much at variance one with another, that the authors, overwhelmed by the immensity and intrinsic difficulties of the task they had voluntarily assumed, have decided to postpone the issue of the second volume until such time as would permit them to go over the entire ground again in the special department of drugs.

We must protest, at the very beginning, against the abuse of mixed types, the effect of which is to give undue prominence to words and expressions the significance whereof is not commensurate with the prominence thus thrust upon them. The heavy type is distributed as captiously as the underlines in a lady's epistle, and distracts the reader's attention from the continuity of the paragraph.

The classification adopted is largely that of Garrod, modified by the discoveries and teachings of Lauder Brunton; but various tables are introduced to aid those who prefer, or are accustomed to, other methods, each of which has its advantages as well as its inconveniences. The authors deplore the tendency to relegate materia medica proper to a second-rate position, but their lament will probably fail to meet with an echo on this side of the water, where too much attention is given to mere nomenclature and too little to properties.

Turning to the substance of the work, we may safely affirm that, while not always quite up to the authors' ideal, it is a careful, painstaking and thorough labour. The authors have evidently been at some trouble to adopt whatever in matter or style has appeared to them worthy of commendation in the numerous well-known text-books. These features they have embodied in a practical treatise which will certainly make its mark. We shall await with interest the second volume which, we learn, is already in hand.

ARTICLE 64.

Revue des Sciences Médicales, en France et à l'Etranger Recueil Trimestriel, dérigé par Dr. GEORGES HAYEM, Professeur de Thérapeutique à la Faculté de Médecine de Paris. Paris: G. Masson, Editeur. January 15, 1890.

THIS well-known quarterly compendium of the advances made all over the world in the various departments of medicine now enters upon the eighteenth year of its existence—a reliable certificate of excellence in the past. Practitioners are naturally more interested in the departments bearing upon the curative agents and methods of treatment, and these are fuly as rich in material as one has a right to expect in a publication which only professes to comprise the progress of the preceding three months. In therapeutics the latest views on the treatment of tuberculosis naturally occupy a large share of attention, and the list of contributors is long. Diphtheria, too, is evidently the subject of much clinical and experimental investigation, not, unfortunately, as yet crowned by the success which the yearly increasing mortality from this affection renders one anxious to witness. The selection appears to have been made methodically and with praiseworthy impartiality, at any rate, in so far as English-speaking races are concerned, though it is not to be inferred from this that German science has been ignored. The *recueil* concludes by a very elaborate bibliographic table of works and papers, which fulfils a very obvious want; and we know of no other source of information which can compare with it for completeness.

Notes on Books.

Article 65.

The monograph on "The Comparative Activity of the Active Principles of Digitalis," by Dr. G. Bardet, chief of the Therapeutical Laboratory at the Hôpital Cochin, deals with them exclusively from the pharmaco-dynamical point of view. The author commences by defining the products so differently described and named by chemists, and points out that the costly substance sold as digitaline in France is far more active than the product sold under that name in Germany or elsewhere as digitalein; in fact, these substances are chemically different. The French digitaline resembles what the Germans call digitoxin, except that the latter is rarely, if ever, met with perfectly pure. The great point to bear in mind is, that the crystallizable product is ten times more active than the amorphous. The result of a series of experiments on animals was to show that the fatal dose of crystallized digitalin for frogs is between $\frac{1}{10}$ and $\frac{2}{10}$ of a milligramme ($\frac{1}{600}$ to $\frac{1}{300}$ grain); for rabbits, about 3 milligrammes ($\frac{1}{22}$ grain) per kilogramme of body weight. The amorphous product, prepared according to the French Codex, gave much the same result, but this is because it is not really amorphous, since it is readily soluble in chloroform, from which it may be made to crystallize. The German "digitoxin" gave results corresponding to from 35 to 55 per cent. of pure digitalin. Digitalein is a substance of comparatively feeble toxic powers, the quantity required to kill rabbits being about 7 centigrammes (1 grain) per kilogramme weight of the animal. German digitalin is that active principle of digitalis which is soluble in water, and samples vary greatly in their activity, they being for the most part from 30 to 40 times less active than the crystals. He concludes that pure chloroformic digitalin (crystallized or amorphous) and digitoxin, are identical.

Article 66.

The Year Book of Treatment for 1890. (London: Cassell & Co.) Within most moderate limits contains an extraordinary amount of information, consisting, in fact, of a series of exceedingly concise abstracts of all the papers that appeared in the twelve months preceding September 30th, 1889, in any way bearing on treatment. The names of the gentlemen to whom the various departments have been entrusted are a sufficient guarantee that the work of annotation has been carefully and thoroughly done, and we need say no more about it than that it is a book which every practitioner will find helpful at some time or other.

Article 67.

The third number of the "Archives of Surgery," edited by Mr. Jonathan Hutchinson (Churchill: Jan. 1890), contains several papers of exceptional interest. There is a short addendum to a preceding article on "Exceptional Results from Vaccination," and another on "Small-pox and Vaccination." The editor's personal records of intestinal obstruction are continued, preceded by some brief critical notes on heredity. There are, as usual, four coloured illustrations this time bearing on some less common varieties of lupus.

Article 68.

Dr. **Byrom Bramwell** continues his interesting "Studies in Clinical Medicine" (Young J. Pentland) and the sixteenth issue is now before us. The discussion on the symptoms and signs indicative of intracranial tumour is carried a stage further, and a remarkable and instructive instance of such a tumour in a girl of 20 is given. The rest of the number is devoted to the consideration of optic neuritis and the treatment of typhoid fever.

Article 69.

With regard to "Aids to Ophthalmic Medicine and Surgery," **Jonathan Hutchinson**, Jun., F.R.C.S. (Bailliere, Tindall & Cox) even themost captious critic must admit that Mr. Hutchinson, in this little book, has performed his task in a praiseworthy manner. to condense so many facts into so small a compass, and yet preserve the practical usefulness of a larger treatise, was a great accomplishment to have achieved. The wide expanse which the field of ophthalmic literature has now attained adds largely to the difficulties of undertakings of the kind under discussion; and upon these grounds the author is to be congratulated upon the result of his painstaking. We are persuaded that the little book will become extensively popular, and mainly because it places before the student precisely those points of his subject which it is essential for him to know. The descriptions of the various diseases are plain and unmistakable, and the methods of treatment laid down are concise and to the point. We can confidently recommend it as the best book of the kind which has up to the present been published.

H. Percy Dunn.

Article 70.

The author of "Some Relations between the Diseases of the Nose and Eye" says that nearly all persons who suffer from chronic hypertrophic rhinitis are also subject to epiphora; the latter varies according to the swelling of the mucous membrane of the nose. When there is little swelling, or, to put it more plainly, when the patient can breathe through the nose, there is little or no epiphora. When the mucous membrane is swollen and the nostril is closed, the epiphora is well marked. In most cases, the author states, of mucocele or of abscess of the lacrymal sac, especially in recurrent abscess, some affection of the corresponding side of the nares can be found. Dr. Gruhn found that out of thirty-eight cases of mucocele, the nose was affected in thirty-six. Mucocele not only gives rise to epiphora, but in most cases, also, to conjunctivitis and often keratitis. Phlyctenular ophthalmia, or marginal keratitis in children, which has a great tendency to recur, is nearly always associated with some affection of the nares. Zein draws attention to the fact that in most cases of granular lids there is always rhinitis.

New Preparations.

In the *Prov. Med. Jour.*, January 1890, p. 29, attention is drawn to a kind of Madeira cake made by Mr. Preston, of High Street, Ramsgate, and called the "Patent Ambrosia Cake." The two principal ingredients are haricot flour and pounded almonds. This cake is highly nutritious and very agreeable.

Another preparation to which attention is drawn is Richardson's Peptocolos. It is a combination of pepsine, pancreatin, diastase, lactic acid, and hydrochloric acid. It is one of the surest and best remedies for feeble or disturbed digestion, or for chronic dyspepsia. It is readily taken in doses of one or two teaspoonfuls. The authors also recommend the various mulls and soaps made by Messrs. Wooley, Sons & Co., after the formulæ of Dr. Unna, in his dermatological practice. These mulls are loaded with different medicines, as chrysarobin, boracic acid, etc. The soaps are of two kinds—medicated and simple—and are specially recommended.

A new Lithia Water, called the St. Marco Lithia Water, is claimed to have proved of great service, and a more extended use of the water is very desirable to test its value in the gouty diathesis.

Dietetic Preparations.

"SANTHA" TEA.

FURTHER experience with "Santha" Tea confirms the favorable opinion we at first formed of it, and we are glad to find it is making sure and increasing progress amongst tea drinkers. We may remind our readers that the great object the inventors of "Santha" had in view was to render inert the action of tannin upon the membranes or food. This is effected by the addition of a definite excess of gelatine, so as to form a soluble sub-tannate of gelatine. By retaining the other attributes of the leaf, the "Santha" Tea Extract contains all the good properties of tea, without its injurious ingredient. The position of the inventors of "Santha" is unassailable when they affirm that their product having, unlike ordinary tea, no action upon gelatine (the animal substance which is most sensitive to tannin), must, *a fortiori*, have no action upon other animal substances, whether food, peptones, pepsin or the living tissues and membranes. Santha is, consequently, of great value to dyspeptics and convalescents, who can drink it with advantage, where ordinary tea would be injurious to them. The excellent flavour of the product is another recommendation, while the extreme ease with which it is prepared renders it a boon to nurses, travellers, &c., and the fact that many leading physicians are recommending it shows that it has secured their approval.

Obituary.

WE regret to announce that Sir William Gull died on Wednesday last at his residence, 74, Brook Street, London, from paralysis. Sir William was seized with a severe attack of paralysis just over two years ago, while staying at Urrard, Killiecrankie, and never sufficiently recovered to resume his practice.

Sir William Withey Gull was born at Thorpe-le-Soken, in Essex, in December, 1816, so that he had recently completed his 73rd year, and, like many men who have risen to eminence, he was of humble origin. His father, a barge owner on the River Lea, was a tenant of Guy's Hospital, and received from the then treasurer, Mr. Benjamin Harrison, a presentation for his son to Christ's Hospital. After completing his education there, the future baronet took an engagement as usher in a school at Lewes; and while he was so employed, a need arose for some one who wrote a good hand, and understood Latin, to prepare a new catalogue for the Museum of Guy's Hospital. The treasurer thought of young Gull, who accepted the position offered him, and he soon afterwards showed a desire to become a member of the medical profession. He entered as a pupil at Guy's in 1837, was a very zealous and distinguished student, and when he had graduated as Bachelor of Medicine at the University of London in 1841, the treasurer determined to secure his future services for the hospital. He was appointed assistant resident medical officer and medical tutor, and afterwards resident superintendent of a small asylum for 20 insane women, which formed part of Guy's. In 1843 he was appointed lecturer on natural philosophy, and in 1846, on physiology and comparative anatomy. In the same year he took his degree as Doctor of Medicine, with honours, and in 1848, was elected a Fellow of the Royal College of Physicians. In 1847 he became Fullerian Professor of Physiology at the Royal Institution, and in 1848 he gave the Gulstonian lectures (on paralysis) before the Royal College of Physicians. He was appointed assistant physician to Guy's Hospital, and afterwards, in due course, physician and consulting physician. In 1856 he became Lecturer on Medicine, and held this office until 1867. He was Censor of his College for the years 1859-1861 and 1872-73, and delivered the Harveian Oration in 1870. His first great step in practice was in connection with the last illness of Bishop Blomfield, in 1857, and after this he rapidly rose in the estimation of the public until the time when, as Physician in Ordinary to the Prince of Wales, he took the chief direction of the treatment of his Royal Highness during his attack of typhoid fever, at the close of 1871. In acknowledgment of his great services on that occasion he was created a baronet in January, 1872, and Physician Extraordinary to the Queen, and was made Physician in Ordinary in 1887. In the autumn of the same year he was, for the first time, attacked by paralysis when in Scotland; and, although he rallied, and recovered to a great extent, he has not since been able to engage in practice.

In the course of Sir William Gull's long and honourable career, many distinctions of various kinds were bestowed upon him. He was made a D.C.L. of Oxford in 1868, a Fellow of the Royal Society in 1869, LL.D. of Cambridge in 1880, and of Edinburgh in 1884. He was a Crown member of the General Medical Council from 1871 to 1883, and representative of the University of London in the Council from 1886 until his illness in the following year, Sir William Gull was not a large contributor to the literature of his profession, but what he did in this direction was work of a high order. Perhaps the best known of his writings was the report on cholera for the Royal College of Physicians, which he prepared conjointly with the late Dr. Baly. He was also the first to describe, under the name of "a cretinoid condition in the adult," the disease which has since received the name of myxœdema. In 1848, while still a resident official at Guy's Hospital, Sir William married a daughter of Colonel Lacey, of Carlisle. Lady Gull and a son and daughter survive him. The son, Mr. William Cameron Gull, who inherits the title, is a barrister, and the daughter is married to Dr. Acland, of Brook Street, son of Sir Henry Acland.

The funeral will take place on Monday next at Thorpe-le-Soken, near Colchester, where Sir William's father and brother are buried; and a train conveying mourners will leave Liverpool Street Station at 10 o'clock.

Miscellany.

The Supreme Court of Georgia has decided that the proprietor of a patent medicine is liable for damages for injury done to any person who takes the medicine according to directions.

At Nordhausen, in Prussian Saxony, the municipal authorities, at the suggestion of the district medical officer, require barbers and hairdressers to disinfect their instruments each time they have been used.

The University of Basle is the only one in Switzerland which still refuses to admit women to its medical teaching. A petition has lately been presented to the Dean of the Medical Faculty, praying for the removal of this restriction.

A case is recorded of a child being poisoned by chewing the stem of a common Calla or Richarda Africana. The symptoms were rigors, vomiting, paleness, and subsequent lividity of conntenance, convulsive movements, and failure of circulation, the child being in a critical condition for several days.

The latest strategy of a Paris paper for attracting readers is the engagement of two eminent physicians to attend gratuitously upon its annual subscribers. Recently the manager of the paper gave notice to one of the physicians "not to prescribe for B any more; his subscription has expired." The doctor replied: "So also has B."

A Pair of Forceps left in the Abdominal Cavity.—Two prominent surgeons in Pittsburg are charged with having left a pair of forceps in the abdominal cavity of a woman after a laparotomy. The presence of a foreign body was discovered by another surgeon, whom the patient had called in, and the wound was reopened and the forceps removed by him.

Saccharin.—The importation of saccharin has been for some time forbidden by France, Spain, and Portugal. Italy and Hungary have now followed the example of these countries. In Belgium a duty of 140 francs a kilogramme is levied, not only on saccharin, but on all products containing more than 50 per cent. of it. In Holland a duty of 60 florins a kilogramme will probably soon be imposed on saccharin.

Chair of Ophthalmology in Lisbon.—Dr. F. J. R. Mayer, of Germany, has been appointed to fill the newly created chair of ophthalmology, in Lisbon. But Dr. Mayer does not possess a Portuguese medical diploma, and this is made the excuse for an active protest on the part of one of the medical journals of that country, in which Dr. Mayer is represented as a "Cis-Atlantic know-nothing."—*(Gaz. Med. de Strasburg.)*

The centenary of the death of John Howard, the philanthropist, fell on January 20th, this year, and to commemorate this event it is proposed to erect a statue of him in bronze at Bedford, where he spent much of his time, and where his house is still to be seen. It was his appointment as high sheriff of the county in 1773 that determined his whole philanthropic career. Towards the erection of the proposed statue subscriptions are solicited, which may be paid to Messrs. Smith, Payne, and Smith, bankers, London.

Deaths from Hydrophobia.

The deaths from hydrophobia in London were fewer last year than in any year since 1868. As compared with 60 deaths in 1885, 26 were recorded in 1886, 29 in 1887, and only 14 in 1888. These records are of great significance in connection with the renewal of the muzzling order, against which such a fatuous outcry has been raised by certain persons. We are firmly persuaded that it is only by the due enforcement of the order throughout the country that the fearful disease in question can be stamped out.

Prize Essays.—The Spanish Medico-chirurg. Academy offers two prizes of 250 m. each (£12 10s.) with the honour of corresponding membership of the Academy, for the best essays on the following subjects: *(a)* Modern discoveries in the province of physics. Have any of them assisted in facilitating diagnosis? *(b)* Limits of the expectant method and the therapeutical value of hygiene in chronic diseases of the stomach. The essays may be written in either Spanish, Portuguese, French, English or German, and must be sent, with the usual formalities, by September 15, 1890, to the Secretary, Montera 22, Madrid.—*(Independencia Medica.)*

In St. Louis, U.S., some consternation was recently created by the appearance of a leper in the Circuit Court, on a writ of *habeas corpus*. It was alleged that he had been sequestrated without due cause by the Health Commissioner, who detained him in quarantine hospital. His lawyer denied that he was suffering from leprosy, or any other infectious or contagious disease. His appearance, however, was so loathsome, that the court held his leprosy to be proved beyond a doubt, and the judge promptly ordered him back to quarantine hospital. The court was hastily adjourned, and the room fumigated.

The proper time to take medicine, according to Christison, is as follows:—Alkalies and iodine compounds on an empty stomach, the latter mixed with food containing acids, starch, &c., is too easily decomposed, and its action impaired. Acids should be taken on a full stomach, unless the stomach be already acid, when they should be taken before meals. Potent mineral substances such as arsenic, copper, zinc should be administered after eating, silver nitrate before, and mercury, tannin and alcohol when the digestion had ceased. Phosphates, cod-liver oil, malt extracts and constructives generally, during meal time, and be digested with the food.

Death by Electricity.—The coroner's jury in the case of Harris, the New York salesman, who was killed by an electric light wire coming into contact with a show-case which he was assisting in carrying, has rendered a verdict which finds the Brush Electric Light Company wholly responsible for Harris' death. The finding also makes the following recommendations: (1) That the Board of Electrical Control and the Board of Health be requested to use extraordinary and speedy measures to have the wires of all the electric light companies of the city laid under ground, and (2), that the said boards use all necessary care to have the wires and lamps of the electric light companies properly insulated.

The Forest Gate Fire.—The verdict of the jury in the inquest on the unfortunate victims of the school fire at Forest Gate, stamps the occurrence as accidental, but some categorical riders are added calling attention to certain practices which ought on no account to be permitted, such as locking the dormitory doors, and enjoining the necessity for more adequate provision being made for escape in the event of fire. It certainly strikes one as imprudent, to employ a mild expression, to lock up the children on the one hand and to abstain from providing any facilities for their escape, should such a by-no-means unlikely contingency such as a fire occur. It ought to be incumbent on the local authority to see after these things and to enforce, if need be, the observance of certain obvious and elementary precautions.

Dr. Brunton and the Pariah Dog.—A very pretty story was circulated by our imaginative Indian contemporary, the *Pioneer*, to the effect that Dr. Lauder

Brunton had been bitten by a mad dog, the evil consequences of which were averted by a very thoughtful preinculation on that gentleman's part. Reduced to its proper dimensions by Dr. Brunton himself, it seems —fortunately for himself—that he played the part neither of a hero nor a victim First, the dog was not mad, but only "evil-looking," a much less distressing condition. Then, again, it only bit Dr. Brunton when roughly seized by the scruff of the neck, a severe test for the patience of even a well-bred cur. Lastly, the statement that the illustrious therapeutist had taken the extraordinary precaution of pre-antirabic inoculation proves to be devoid of foundation.

The Maybrick Case.

THE "Maybrick Case" is evidently not done with yet. It seems from the *Medical Press* that a good deal of activity is in progress, with a view to obtaining a release of the convict. The burden of collecting evidence for the attainment of this object is mainly being borne by Mr. Alexander McDougall, who, in a long letter to our contemporary of the 22nd inst., explains what he is doing in this regard. In a succinct manner he states that the facts he is quietly accumulating go "straight to the questions of how, why, and by whom was this charge of murdering her husband put upon Mrs. Maybrick at all." This statement, as far as the medical profession is concerned, simplifies the matter greatly. Plainly, in Mr. Alexander McDougall's opinion, the problems which call for solution in the case, are now more of a legal than of a medical nature.

"Refractory Errors."

THE following sentence occurs in an American medical contemporary:—"The secretary of war has directed that the standard for vision prescribed for the army may be departed from for the enlistment of members of the hospital corps, to the extent that applicants may be accepted who are subject to *refractory errors*, such as myopia, hypermetropia, prestyopia, and astigmatism, provided these errors are not excessive, and are not accompanied by ocular disease." The italics are ours. "Refractory errors" sounds somewhat odd, perhaps, because we are not accustomed to the term. However, at present, we think that "refractory errors" has about as much to do with "errors of refraction," as a "horse chestnut" has to do with a chestnut horse. Astigmatism, especially mixed astigmatism, is, of course, very "refractory" at times, and gives great trouble, but after proper "correction" has been applied by the ophthalmic surgeon, it would be unkind, to say the least of it, to still continue to call it a "refractory error." The dictionary says that "refractory" means "perverse," and we think the dictionary in this instance is right. Nothing of a "perverse" character that we know of belongs to the ordinary errors of refraction after they have been duly corrected.

Messrs. BURROUGHS, WELLCOME & Co., write us, that, it may not be too late in the day to call attention to a plan which has proved very efficacious in their hands for the prevention of influenza, the more so as the plan is one which lends itself to the preservation of health and the prevention of disease generally. Less adapted to domestic use, it is admirably suited for offices, factories and the like. Briefly described, it consists in the use of some system of ventilation, the incoming air being filtered and warmed by the waste steam from the boiler. It may advantageously be impregnated with some volatile and possibly fragrant antiseptic, such, for instance, as eucalyptia, pinol, &c. In their own offices the system is that known as the Sturtevant apparatus, and the results, apart from securing ventilation and a proper provision of pure warm air at all times, have been singularly satisfactory in protecting their employés against attacks of the prevailing influenza, while in neighbouring unprotected offices the employés have been down by the dozen. They are therefore glad to have an opportunity of bearing testimony to the simplicity and efficiency of the method. A comparative immunity from influenza has also been experienced where the antiseptics have been sprayed through the rooms or evaporated from blotting paper.

AN OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY FOR THE NORTH OF ENGLAND.—A new society was formally inaugurated on Friday, January 17th, in Manchester, by the adoption of rules of membership and the election of officers. Professor Wallace, of Liverpool, was elected the first President; Dr. Walter, of Manchester, the Hon. Treasurer; Dr. Sinclair, of Manchester, the General Secretary. The Vice-Presidents were Dr. Lloyd Roberts, of Manchester; Drs. Burton and Alexander, of Liverpool; Drs. Wright and Braithwaite, of Leeds. The Hon. Local Secretaries appointed foe each centre are Dr. Briggs for Liverpool, Dr. Donald foa Manchester, Dr. Rumbold for Leeds. The Council consists of eight members nominated from each centre, in addition to the officers named. The need for association amongst the gynæcologists of the North, and the immense amount of material that it is felt ought to be utilised for science, and not allowed to run to waste, were the motives that called the society into being. The movement is one in the right direction, and cannot fail to be a success. We may congratulate the new society on its auspicious commencement. It is stated that the first business meeting will be held in Manchester on Friday, the 21st of February, when the President, Dr. Wallace, will open a discussion on "Localised Ascites."

SUICIDAL LAPARATOMY AND INTESTINAL RESECTION.—A few weeks ago a remarkable case of suicide is reported to have occurred in San Francisco. The subject, an Austrian, on December 14th, complained of pain in the abdomen, and was taken to the French Hospital, but left there of his own accord on the 17th. He told people that he would be killed if he remained there, and that he did not get enough to eat. On the day preceding the act he was seen by several persons, but evinced no symptoms of mental aberration. About 6 a.m., on the 18th, his room-mate was awakened by a noise, and saw him standing in the middle of the floor, with a large gash in his abdomen, from which he was pulling out his intestines. The horrified spectator rushed out for an officer, and on returning, it required their united efforts to secure and handcuff him, so as to prevent further damage. He was taken to the receiving hospital, repeatedly declaring that he "wanted to go to Jesus." Upon examination a large coil of the ileum, almost completely severed, was found outside the abdomen. This portion of the intestine presented a well-marked intussusception, of several days' standing. The patient did not survive many hours. It was suggested at the inquest that the patient might have been animated by a desire to remedy the intussusception, but the idea is more ingenious than plausible.

FRENCH DOCTORS AND THEIR GRIEVANCES.—French magistrates claim the right to call upon doctors to make an autopsy for a merely nominal payment, and this has long been the matter of discontent and agitation. A few weeks since a number of doctors at a place called Rodez, were ordered by the Court to make an autopsy in the case of a girl who was found dead, and presumed to have been murdered. The doctors had, however, agreed not to answer the Court's mandate, and they one and all refused to attend. This was an effort on their part to force the hand of the law to make justice pay more than the usual very small fee allowed (from 5 to 10 francs). The Court, however, called them all up and fined them 6 francs each for non-compliance with a legal requisition. A doctor can refuse the requisition of the law, unless the case is *absolutely urgent*, which it rarely is in found-dead cases. He can also say that he is not competent to judge if the person was murdered or not, and in this way defeat the judges, and it is likely that some means will be taken to force the authorities in France to give a reasonable fee to physicians who are called upon to make an autopsy and make a detailed report. The French doctors consider it rather hard to be called upon in such cases, and fined if they decline to go, or if they do go, to have to accept next to nothing for their services. Then, as a contrast to this arbitrary action of the law, it is well known that a doctor has the greatest difficulty in obtaining the assistance from the Courts in France when he wants to make a recalcitrant patient pay his bill, and in fact the law is so little in their favour that they seldom ever sue a patient for a bill; the law only allowing about three francs and a-half for each visit. Reform is evidently needed, but unless forced on the Government by concerted action, there is little chance of its being granted.

Retail Chemists and their Shortcomings.—Some useful work has been done during the last few months by systematic inspection of the way in which retail chemists discharge their responsible duties in the provinces. We have no means of ascertaining what proportion of the cases submitted to analysis were held to justify legal proceedings, but the instances which have had for their *dénouement* an appearance before the magistrates are, of their kind, instructive. One case in particular, which has excited a good deal of interest in professional circles, was that of the Nottingham chemist who mixed his saccharine with milk sugar, a method of manufacture which the magistrates did not consider to call for censure, and in this opinion the *Lancet* apparently concurs. Last week a chemist's assistant in one of the northern towns was summoned for a "mistake" of a less dubious character. A prescription was handed in comprising half an ounce each of iodine and iodide of potassium. The mixture on analysis turned out to contain rather more than the quantity ordered of bicarbonate of potash, a decidedly economical substitute although the fine of five pounds inflicted will to some extent dimish the profits on the transaction. In another instance the gravamen of the charge only amounted to the neglect to fill up the mixture with chloroform water, plain water having been used instead. It was urged that the occurrence was accidental, but the bench rightly held that accuracy is an essential thing in such matters, and accordingly inflicted a fine of a pound, *pour encourager les autres*. Last, but not least, we have the case of a Sheffield grocer, who thought to usurp the functions of the chemist, without incurring any responsibility, by selling as paregoric a preparation utterly innocent of opium. His fate, of course, was sealed, and he has probably learned by this time that the ways of the transgressor are hard. It would conduce to the comfort and confidence of patients and practitioners alike if more attention were devoted to this phase of inaccuracy in London, where, we doubt not, inspectors might reap a rich harvest of penalties.

A Californian Borax Lake.—Borax was at one time considered to be a rare element, and at comparatively recent date was selling at £90 per ton, its chief use being for glazing high-class pottery. It is now, however, very plentiful and very cheap, and is found to be useful for a great variety of purposes. In the early part of the present century borax was only obtained from the North of India and Tibet. Later on Italy became practically the sole source of the world's supply until Peru added its quota of borax to the market. Finally, we have some very extensive deposits in America, so that borax, instead of being an element of rare occurence, as was once supposed, is found to be widely spread over different parts of the world. One of the most remarkable of the American deposits formed the subject of a recent paper read by Mr. C. Napier Hake, F.I.C., before the Society of Chemical Industry. This borax deposit, which was carefully examined by Mr. Hake, is a dry salt lake situate in San Bernardino county, California, 450 miles from San Francisco. It lies in the valley of the Slate Range and Argus Mountains, at an elevation of 1,700 feet above sea level. It is of oval form and measures respectively about 12 miles and 8 miles at its longest and widest points. The under portion of the lake is one vast deep bed of black mud, which is for the most part covered with a hard saline incrustation of varying thickness, the surface consisting of a white efflorescent matter. The lake yields bicarbonate of soda, common salt, and borax; the soda and salt deposits, however, possess no commercial value. The borax deposit occupies the northern portion of the lake, and when the crude efflorescent surface has accumulated to about the depth of an inch it is loosened by shovels and swept into wind-rows, sufficient space being left between the rows to allow of the passage of a cart. When cleared of these salts the surface commences to renew its coating, the moisture being evaporated by the sun. This action is allowed to go on for three or four years before the surface is again disturbed. The crude material is carried by carts from the wind-rows to the factory, which consists of a dissolving house, a concentration house, a refining house, and a boiler house. The process of extracting the borax from the crude material consists simply in dissolving the latter and allowing the solution to crystallize. The crude material is first passed through a mill and then placed in the dissolving pan which contains a boiling saline solution. The solution, with the raw material in it, is kept boiling for a certain time and is then allowed to stand and clarify, after which it is run off into crystallizing pans and allowed to cool. The product of this first crystallization is a slightly impure borax, the refined borax being produced by re-dissolving the first product and cooling the resulting solution down to 120 deg. Fah., and removing the crystals. The works are capable of turning out over 100 tons of borax per month, about 50 men and 65 animals being employed. The refined borax is packed in casks and transported to Mojave, a station on the Atlantic and Pacific Railway, over a good wagon road 72 miles in length. It is carried in a so-called "desert schooner," which is a strongly-built 10-ton wagon drawn by 20 mules. The lake has been regularly worked for the last 15 years under the direction of Mr. J. Searle, the chief owner.

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ARTICLE 71.

NUEL ON AN EXPERIMENTAL STUDY ON INTRAOCULAR INJECTIONS.*

FEW questions in opthalmology have of late years been more fully discussed than the advisability of injecting the anterior chamber after cataract extraction. Such injections have been recommended for two distinct purposes: to render the chamber aseptic, and to remove fragments of lens cortex by the mechanical action of the injected stream. Various solutions have been injected; but the choice made by any given operator has, of course, varied to some extent according to the object he had in view; for although it is absolutely necessary that the injected fluid should contain no septic germs, those who employ it as an antiseptic, of course, require that it shall possess active properties. The solutions that have been employed have been, for the most part, perchloride and protodide of mercury, boric acid, saline solutions, and water that has been sterilised by boiling.

Until the appearance of the present papers we were not aware of any investigations as to the action of these injections upon the tissues of the normal eye, although a knowledge of such would seem indispensable for forming an opinion upon the results that may be expected to follow their use.

The author points out at the commencement that one great difficulty arises from the fact that the normal corneal endothelium has been variously described by different authorities. This is due to the fact that the appearances produced by some re-agents give very variable results under conditions that are apparently identical. After experimenting in various ways, however, the author has found a method which, in his hands, gives constant results. The animals experimented upon were, for the most part, rabbits; but the experiments were repeated with similar results on dogs, sheep, oxen, pigs, and pigeons. Experiments on frogs gave somewhat different results.

The method employed was to inject a 2 per cent. aqueous solution of osmic acid into the anterior chamber of the living animal. If the cornea was removed within three days, and its posterior surface immediately examined, the appearances found were constant. From the nuclei of the polygonal endothelial cells radiating processes could be seen passing in all directions, and becoming continuous with similar processes from adjacent cells. A quarter of an hour after death, even though the cornea remained in contact with the aqueous, changes commenced; the boundaries of the cells became confused, the nuclei shrunken, the anastomosing processes torn across and unrecognisable, and the protoplasm irregularly grouped around the nucleus, and the cell might, in fact, be considered as dead.

Experiments made with water that had been boiled showed that, injected into the anterior chamber, it caused the death of the endothelial cells, which underwent the above described changes, and, being thrown off in shreds, sank to the lower part of the chamber. Here and there a small isolated area would resist the action of the water. The cells that remained subsequently proliferated and helped to regenerate the endothelium.

Injections of corrosive sublimate gave similar but more marked results. The solutions used were 1 in 2,500, 1 in 5,000, and 1 in 10,000. The stronger solutions were allowed to remain in 10 to 20 seconds, the weaker 30 to 60 seconds. In every case the whole endothelial layer was destroyed, no cells escaping as when water alone was used. The dead cells remained *in situ* for a day or two, and then, becoming detached, formed large flakes which fell to the bottom of the chamber and were removed by absorption. Meanwhile, the cornea looked turbid, and there was lachrimation. About the fourth day the endolium began to reform a layer of new cells, gradually extending from the periphery. A solution of boric acid of 4 per cent. was relatively innocuous. None of the endothelium was shed, but after five hours there was some constriction of the nuclei. Solutions of chloride of sodium, from 5 to 7 per cent., produced no change; weaker solutions acted like water.

The comparative inertness of boric acid is attributed by the author to the fact that it is a colloid substance which will not pass through living membranes.

As regards the practical outcome of these results, it is evident that intraocular injections have to be considered from two points of view, namely: as undertaken for antiseptic purposes, and for their mechanical effect. As an antiseptic measure the author considers that intraocular injections should be abandoned. The anterior chamber contains no septic microbes in the natural state, and their introduction during an operation can be avoided by suitable precautions. Moreover, injections of antiseptics in the weak solutions—which is alone safe to use—do not suffice to kill microbes—a solution of corrosive sublimate, 1·5000, taking several hours, and boric acid takes three days to kill pyogenic micrococci.

As regards the mechanical action of injections for removing cortex in cataract extraction, the author considers that its advocates have themselves, by giving up iridectomy, created the difficulty which they thus seek to remove. If injections are, however, to be used at all, he would prefer solutions of chloride of sodium.

In the discussion which followed, Messrs. Panas, Gayet, Chibret, Vacher, Wicherkiewiez and others took part. It was pointed out that the failure of a given solution to kill microbes did not necessarily show that it was useless as an antiseptic, for it might act upon their secretions and modify their action. If the surface of agar-agar be washed with a 1-3000 solution of corrosive for a minute, that surface becomes sterile for the coccus pyogeneus aureus for several days.

Another speaker pointed out that if the lesions described were really produced by mercurial solutions they were of no practical importance, since they were soon recovered from. Several speakers, on the other hand, considered the introduction of mercurial solutions to be injurious and useless as an antiseptic precaution.

W. ADAMS FROST.

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* *Bulletins de la Société Francaise D' Opthalmologie*, 1889.

ARTICLE 72.

SAUNDBY, ON CATARRH OF THE STOMACH.

ONE of the most common affections the physician—especially the town practitioner—is called upon to treat is gastric catarrh, and at the same time it is one of the most intractable, notwithstanding that great advances have, during recent years, been made in its treatment. The most modern views regarding the disease and its treatment were recently discussed in a clinical lecture, delivered by Dr. Robert Saundby at the General Hospital, Birmingham, and reported in the *Provincial Medical Journal* of Feb. 1, 1890.

As to the more common causes of the disease, Dr. Saundby points out that acute or subacute catarrh of the stomach is most often seen as the result of some error of diet; it may be taking indigestible food, irritating food, or food in excessive quantity. Anything which retards digestion, such as alcohol in large quantities, or insufficient gastric juice, leads to decomposition of the stomach contents, and consequent catarrh. He also regards cold as a common cause, especially in railway travelling; and many persons get an attack of catarrh of the stomach after the subsidence of an ordinary cold in the head. Chronic catarrh may result from acute catarrh occurring under the conditions above referred to; but it is especially associated with chronic alcoholism, excessive tea drinking (the lecturer stated that among the Assam tea planters who drink the beverage made from the new leaf very strong, he has seen very intense gastric catarrh so caused), the habits of going too long without food and then eating an undue quantity at one meal, imperfect mastication from hasty eating or want of teeth, the habitual use of iced water, the excessive use of condiments—especially red pepper—and finally, it is associated with the chronic venous congestion resulting from chronic heart and lung diseases.

In its early stages catarrh of the stomach is attended by intense irritation and abolition of the proper digestive function, and as it progresses it causes permanent destruction of the glands which secrete the gastric juice, and paralysis of the muscular wall by which the due mixing of the ingesta with the gastric juices is affected, and the chyme ultimately forced into the intestine.

Of the symptoms, the one first to be noted, because the most prominent, is *pain*. This, however, is a symptom in many gastric disorders. The pain in gastric catarrh is a burning soreness felt behind the sternum, and often going through to the back and radiating round to the left. It is frequently associated with local tenderness. This pain comes on two or three hours after food, when the hyperæmia of digestion has reached its maximum, and the inflammation is correspondingly aggravated. It sometimes may be distinctly felt by the sufferer to extend into the æsophagus. This pain is most characteristic, and can be caused by nothing else; but its presence depends upon the degree of inflammation. If this is slight, and this is especially so in the milder cases of chronic catarrh, there may be no pain at all. In very acute catarrh the introduction of any solid food into the stomach may set up pain *at once* by simple contact with the inflamed mucosa. The second symptom is *nausea*, with or without *vomiting*, occuring in a characteristic manner—that is to say the nausea occurs when the stomach is empty, especially before breakfast, and that meal is often vomited. The explanation seems to be that the stomach, after the long night's fast, contains a quantity of irritating mucus, which excites nausea, intensifies the catarrh, and renders the stomach specially intolerant of food. In heart disease vomiting due to catarrh of the stomach is a most formidable complication. A minor expression of the same state of things is the *regurgitation* of food into the mouth during and after meals. *Catarrh of the pharynx* is often associated with catarrh of the stomach, and it gives rise to cough on lying down at night, or on rising in the morning, and the cough is often followed by retching and vomiting of frothy mucus, *furred tongue*, with dryness of the mouth, and foulness of breath, and other symptoms, but these are not constant, as in mild and chronic cases the tongue may be quite clean. In acute catarrh *appetite* is wanting; *constipation* is frequent, but there may be looseness should the catarrhal condition extend to the intestines. *Jaundice* occurs occasionally when the inflammation extends to the duodenum and along the common duct.

As to treatment in acute catarrh of the stomach, the rational treatment is to put no food in it. Let it rest. If food must be taken, it should be milk and lime water in small quantities, or, better still, peptonised milk. If this restricted diet is not acceptable, or the case not sufficiently severe to demand it, the following may be permitted to two days:—

Breakfast.—A cup of cocoa, not to be drunk while hot, or bread and milk. A little boiled fish or a poached egg with one small slice of toast.

Luncheon.—A cupful of Benger's peptonised food, or a custard pudding.

Dinner.—A little boiled fowl or a stewed sweetbread, with toast; no vegetables. A milk pudding. No beer, wine, or spirits. Aërated water, if preferred. Fluids to be taken in small quantities. In addition, order the following powders:—

℞ Hydrarg. subchlor..................... gr. ij.
Sacch. alb. .... gr. v.
f. pulv. mitte ij.
Sig. One to be taken at bedtime.

℞ Bismuthi carb. .... gr. x.
Sodii bicarb. .... gr. x.
Pulv. rhei. .... gr. iij.
Pulv. cinnam. co. .... gr. v.
f. pulv. mitte vi.
Sig. One to be taken in milk before each meal.

If there is much pain, a mustard leaf to be applied over the seat thereof.

In chronic catarrh, associated with cardiac disease or bronchitis, relief depends upon removal of the venous congestion. Purging and digitalis may do good; but such cases are very intractable. Anæmia calls for iron, preferably the saccharated carbonate in doses of half-a-drachm three times a day, or three Blaud's pills thrice a day. All sufferers from chronic catarrh of the stomach must be rigidly dieted. Three meals to be allowed daily at fixed hours: breakfast 8 to 9, luncheon 1 to 2 and dinner from 7 to 8. On rising, the patient to sip from five to six ounces of quite hot water, with or without a teaspoonful of Carlsbad salts, as may be necessary. This will wash the stomach clean of decomposing mucus. If there is much nausea, an emetic of sulphate of zinc (half-a-drachm) may be given the first morning.

The diet to be as follows:—

Breakfast.—If the stomach is very irritable, no hot drinks, such as tea, coffee or cocoa, should be allowed, but a cup of cold milk and water substituted. Afterwards cocoa or chocolate may be taken, with very little sugar. Boiled fish, boiled or poached eggs, or a little smoked or salted ham, may be eaten with two small slices of dry toast, but fats should be taken very sparingly. No fruit or vegetables or sweets should be allowed.

Luncheon.—Two arrowroot biscuits, or small slices of toast; oysters (with lemon juice, not vinegar); a mutton chop; a slice of cold meat, fowl or game (not high); milk pudding; aërated water.

Dinner.—No soup. Boiled white fish; stewed sweetbreads, tripe, cowheel, calf's feet or head; lightly cooked beef or mutton, roast or boiled; fowl or game; no pork or veal; no vegetables except a little well-cooked potato; milk or custard pudding, jelly, isinglass blackmange; no fruit or pastry; no cheese. No beer or spirits. Aërated water is the best drink. A glass of claret, with aërated water, or a glass of dry champagne, is permissible—no other wine.

By way of medicine the bismuth and rhubarb powder, as above, should be taken before meals if there is pain or irritability. When the symptoms point to sluggish digestion, fulness and weight after meals, ten drops of dilute hydrochloric acid may be given in a wineglassful of water an hour after each meal, or the following mixture:—

℞ Acidi hydrochlor. dil........................ ʒij.
Acidi hydrocyan. dil........................ ʒj.
Liq. strychninæ........................ ʒj.
Glycerini........................ ℥ss.
Aquam........................ad ℥vi.

Sig A tablespoonful in water an hour after each meal.

When there is diarrhœa from associated intestinal catarrh, the continued use of small doses of liq. arsenicalis is often of striking benefit. In very obstinate cases, Dr. Saundby recommends a course of treatment at Carlsbad. GEORGE BROWN.

ARTICLE 73.

DOCKRELL, ON HYDRONAPHTHOL, AS A SPECIFIC IN THE TREATMENT OF TINEA TONSURANS.

IN hydronaphthol we have found a remedy, the proper use of which will prove a power in combating the ravages of the trichophyton fungus. It is a secondary compound of beta naphthol, and was obtained from it by Justus Wolf, of New York, by a molecule of hydroside having displaced an equivalent of hydrogen in the process. It has a slight aromatic taste, is almost odourless, sparingly soluble in water, but easily dissolved in alcohol, ether, chloroform, and glycerine; it is non-poisonous, non-irritant, non-corrosive; according to Mason, precipitating albumen and gelatine in their neutral or acidulated solution, on which function is based its antiseptic action, and by it the contents of the protoplasm are caused to congeal, and in a supersaturated solution their destruction is complete; hence its germicidal and prophylactic properties. Fifteen grains in a single dose have been taken internally without bad effect.

Hitherto the failure in the treatment of tinea tonsurans has been due, in the first place, to allowing oxygen too free access to the fungus, acting, in fact, as if we did not know that it is necessary for a mould fungus to flourish, that it should be abundantly supplied with oxygen, and kept at a temperature below the normal state of the body; secondly, we have not adopted the best means of securing penetration of the remedies employed, and there has been gross neglect in preventing the spread of the disease by using applications which cast a slur on antiseptics; and lastly, we want a potent germicide which does not set up extensive dermatitis. And in finding such a germicide, it is well to remember the fact laid down, I think, by Koch, that many micro-organisms have two states of existence—an adult form, where the organism is growing rapidly and is very easily killed, and a spore form which rests and provides for the future existence, being very difficult to kill. So that when a (1 in 20) preparation of carbolic oil is used with a view of perfectly carbolising the spores, and so preventing contamination of the atmosphere, and further sowing on the patient's head, we find that the spores of the bacillus anthracis, the admitted standard test of a germicide, after exposure for one hundred and ten days to such a strength of carbolic oil, are not in the least affected—we can hardly wonder at the want of success of the many treatments, based as most of them are on similar fallacies. Thus it is necessary to have a germicide that will act in no uncertain way, that will destroy the spores of the test bacillus with more rapidity and certainty than any other preparation, without producing deleterious local or constitutional results. Then, and not till then, may we assume the self-satisfied lethargy which has surrounded and enveloped the profession all over the world as to the treatment of ringworm; easing its conscience, as it were, from time to time by sending forth some old remedy in new guise, heedless of which, however, the trichophyton still flourishes. In a pamphlet recently published by Dr. Edgington,[*] gives the results of some experiments made to prove the value of carbolic acid, corrosive sublimate, and hydronaphthol, as to the respective germicide and antiseptic properties of each. While strongly recommending the reading of the pamphlet, it will only be necessary for my purpose to cull those experiments immediately bearing on hydronaphthol and corrosive sublimate. And the first experiment I would quote is that made to test the relative actions of each on the spores of the bacillus subtillis, and the bacillus anthracis. In each case the strength of the antiseptic solution used was 1 in 1,000; and it was found that in the treatment of the spores of the bacillus subtillis, the length of the exposure necessary to destroy them was in corrosive sublimate thirty minutes, and in hydronaphthol only ten minutes; in the bacillus anthracis a ten-minutes' exposure was necessary for hydronaphthol, while corrosive sublimate required fifteen minutes to destroy the spores. From this we may fairly conclude that hydronaphthol, as a germicide, is superior to corrosive sublimate, and from being non-poisonous and non-irritant, it affords an ideal medicament for tinea tonsurans. As to the best means of getting the remedy constantly applied, the plasters of hydronaphthol 10 and 20 per cent.[†] give excellent results, limiting the propagation of the disease, and causing the more rapid penetration of the germicide than any other means we can employ. The plasters also help us in starving the fungus, and to perfect this, we need to hermetically seal the plaster round in the way I am about to describe. The method of treatment I have found successful, is as follows:—Have the head completely shaved, leaving the usual fringe all round, then wash with a 5 per cent. soap of hydronaphthol, using water as hot as can be borne. After drying the scalp, apply over the affected area a 10 per cent. plaster of hydronaphthol, in narrow strips, letting each strip overlap its fellow, taking care that the plaster extends quite half an inch beyond the margin of the diseased patch. Outside the margin of the plaster paint a layer of a 10 per cent. hydronaphthol jelly (when melted) so as to exclude all air. At the end of four days remove the plaster, when the diseased stumps will be found adhering to it. Repeat all the previous process, applying for one week a 20 per cent. plaster. Repeat the process, applying this time a 10 per cent. plaster for ten days, when on removal the disease will be found to be cured. During the plaster treatment, apply a 5 per cent. ointment to the unaffected portions of the head night and morning. Care should be taken that all articles brought in contact with the head before treatment be destroyed, otherwise reinfection will take place, and the treatment be brought into discredit.

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[*] The Practical Value of Antiseptic Agents.

[†] Prepared by Seabury and Johnson, 46, Jewin Street.

ARTICLE 74.

DE WECKER ON THE ABUSE OF ENUCLEATION.*

THE author in this paper expresses an opinion that enucleation is practising with needless frequency, and that this is especially the case in England. He plainly hints that the operation is often performed solely or chiefly with the object of obtaining pathological specimens. The insinuation is so base, and so utterly devoid of foundation, that, had it emanated from a less known author, we should have preferred to disregard it.

The author commences by stating that recent publications on the subject of sympathetic affections enable us to distinguish between simple irritation and true sympathetic ophthalmitis, and shows that many enucleations, formerly undertaken for the prevention of the latter, were uncalled for. No doubt this is true; but the writer's subsequent remarks about the unnecessary frequency of enucleation refer to a period which was antecedent to these discoveries of the nature of sympathetic inflammation. A little later on M. Wecker leads his readers to suppose that it is a common practice in this country, in the poorer class of patients, to dissect out the conjunctival sac and to unite the lids. We can assure him, without stopping to discuss the merits of this proceeding, that it is one that is hardly ever adopted.

He next calls attention to the fact, which is, of course, indisputable, that every ophthalmic surgeon sees many cases in which one eye has been lost, and in which enucleation has been advised years previously, to obviate the risk of sympathetic trouble, but in which this has not often occurred, although the eye has been retained. We fail altogether to see the force of this argument If sympathetic ophthalmitis really occurs in only 1 in 50 of such cases (and it in reality occurs much more frequently), it is surely better that 49 superfluous but harmless operations should be performed than one patient should be allowed to become totally blind from the operation being omitted.

The author says that as on an average one death occurs in 300 enucleations, the carelessness with which the operation is sometimes undertaken, or the energy with which it is pressed on hospital patients (*la férocité dont on use envers les indigents pour les décider à pareille operation*) amounts in some cases to homicide.

It is then stated that at Moorfields statistics show that 188 enucleations occurred in 22,150 patients; that the author's own statistics show that in the same number of patients there were only 120 to 130. The Moorfields statistics are, however, surpassed by that of the *Hôpital des Quinze-Vingts*, where there were 120 to 130 enucleations in a clinique of barely 1,000 patients. "It is true, however," (adds M. De Wecker) "that at this period it was necessary to establish a histological laboratory."

These figures refer to a period dating back several years, but the dates are not given.

M. Wecker then proceeds to discuss the object of enucliation with that amount of fairness and moderation that might be expected from his earlier remarks. He describes the operation as an ancient one exhumed by Alfred Graefe, "An outrageously hideous proceeding, which would never have gained any acceptance but for two reasons, the first, a moral (or immoral) one, that it allows the surgeon practically to remove an eye, while he can tell the patient that he will not remove it. The second depends upon the belief that it removes all risk of sympathetic infection and is entirely free from risk to life." We may remark that this latter view is chiefly due to De Wecker himself, who advocated the operation on this very ground (*Annal d'Oculist*, 1886, p. 70).

Our author does not do himself justice; his writings are not forgotten as readily as his natural modesty leads him to suppose. Doubtless, in a few years' time we shall see a paper by him on the "Neglect of Enucleation," pointing out that surgeons, by failing to urge the operation, have led to loss of many eyes from sympathetic inflammation; no doubt some kind critic will then unearth the present paper.

De Wecker considers that enucleation should not be performed in the case of old glaucomatous eyes which are painful, or in cases of extensive staphyloma.

In the first class of cases the author believes that the pain, however great, can always be relieved by repeated puncturing of the sclerotic through the equatorial region. "It is indisputable that glaucomatous affections, whether they have arisen spontaneously, or are result of injury, render impossible (exclurent) transmission by migration. In the first case there has been no infection, and in the second the progress of the glaucoma, obliterates the channels by which sympathic ophthalmia travels." It suits the author's purpose here to consider that as "indisputable" which has never been proved, and is not, we believe, generally accepted. If the opinion that the existence of glaucoma is an absolute bar to the production of sympathetic inflammation is at all generally held, it is very strange that it has never been referred to in discussions on the nature of this latter disease and the mode in which it is propagated.

In the case of blind staphylomatous eyes, in which pain and irritation are constantly present, owing to the lids rubbing against the large and painful globe, the author considers that enucleation is contra-indicated, and that the volume of the globe can be reduced and the symptoms relieved by repeated equatorial punctures!

No reference throughout the paper is to be found to Mules' modification of evisceration, although it is just in these cases that it is so useful. It removes a hideous deformity, allows an artificial eye to be worn with comfort and safety, and if not free entirely from risk, must be much less dangerous than these repeated punctures.

As regards the removal of eyes which have suffered from traumatic infection, the author trusts much to disinfection of the wound as soon after the injury as possible, and adds that, at any rate, it cannot be a sound rule that declares it good to remove the injured eye in every case in which there is a *possibility* of sympathetic infection. Everyone will agree to this if it be added "that enucleation should be performed in every such case, when there is no reasonable prospect of the injured eye regaining useful vision," but from the writer's previous remarks we doubt whether he would accept this.

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* *Ann. d'Oculist*, 1889.

Of course, in the matter of intraocular tumours, the writer has no hesitation in urging the removal of the eye as soon as possible.

W. ADAMS FROST.

ARTICLE 75.

KARL TOUTON ON ZOSTER OF THE HIP, AS A SEQUEL TO AN INTRAMUSCULAR INJECTION OF SALICYLIC MERCURY.

THE author, in his paper in the *Archives for Dermatology and Syphilis*, draws attention to the many communications that have been brought forward on the mild and severe complications resulting from the subcutaneous and intramuscular injections of mercury. Having mentioned what he considers to be the universal poisonous effects, mercurial erythema, stomatitis, salivation, ulceration of the mouth, and mercurial dysentery, he proceeds as follows:—

One appearance, I believe, has not been mentioned as a sequel, which I have found as a result of the intramuscular injection of salicylic mercury.

In the autumn of 1887, a merchant, infected with lues, 29 years of age, healthy in appearance and well fed, made at Wiesbaden, under my direction, a safety cure, without showing any symptoms at the time.

For certain reasons, and in opposition to my usual practice, I determined to administer an injection of salicylic mercury, which I did on the 10th, 15th, 20th, 25th and 29th of July, in the muscles of the buttocks. I adhered to Neisser's prescription in the strength and composition of mixture.

After the first, second, fourth and fifth injections I noticed nothing further than that it occasioned swellings of various sizes, with violent pain, which lasted two or three days. The third injection was made in the forenoon of July 20th, on the left side. The site of the place of puncture was 15 centimetres, and 8 centimetres lower than the sharp point of the trochanter major.

In the afternoon patient observed a lameness and weakness in the muscles of the left hip, and furthermore, a feeling of weight and stinging pain in the region.

It extended in an oblique direction upwards to the sacrum, and last lumbar vertebra, and terminated exactly in the middle line, of which the patient was repeatedly made aware by a pressure which appeared to him very unusual. On the 22nd of July this pain disappeared. On the 21st there appeared in front, and on the outer side of the left hip, an itching eruption, which, up to the 25th of July, on the date I saw it first, had already abated a little.

On this day, in the depths of the left gluteal muscles, a diffused, not sharply defined painless infiltration was observed. In front and outside on the upper part of the left thigh, 17 centimetres below anterior superior spine there presented itself a group of vivid red rough papules, which was of the length of 6 centimetres, and 4 centimetres in breadth; in an oblique direction from outside towards the back, of which some united themselves, to form closely joined groups. These groups divided themselves into three subdivisions. Some formed an equal sized eruption, others were smaller, about the size of half a hemp seeds, with these were mixed some of the size of a pin's head. Little vesicles there were none. On the 27th of July the same picture presented itself; on the 29th the papules were somewhat flatter. Over the whole group there were now to be seen two small pale blue extravasations.

The patient having finished his cure on this day, has not up to the present fulfilled his promise to report to me on the completion of his cure.

The diagnosis of abortive zoster of the thigh was here undoubtedly not to be denied, being the result of the injection which caused the sharp and defined pain in the middle line.

The question suggests itself, whether we have to do with a zoster caused by a direct wound of a small peripheral nerve, or to a zoster from a reflected wound. The place where the zoster was situated is distinctly in the region of the lateral cutaneous nerve of the hip, which takes its root from the lumbar plexus.

The place of injection lay scarcely more in the locality of the ileo-hypogastric nerve, which belongs to the lumbar plexus, which courses over the crest of the ilium, and loses itself in part of the buttocks than in that of the posterior cutaneous nerve, which belongs to the sacral plexus. That is to say, after a direct wound of the buttocks, a zoster forming in the locality of the nerve supplying the muscles cannot be disregarded, especially as the careful preparations of Voigt have shown how frequently the locality of the peripheral nerve endings encroach on the other side.

The hypothesis of the reflected zoster find support through the pain which extended from the place of injection up to the middle of the sacrum, and which pain preceded the appearance of the zoster. I remember the zoster cruralis, which was observed by Jowel in a severe case of uterine disease, which itself, with intense neuralgia, left behind an affection of the genitals, which was considered by the author a reflex zoster.

This view may be taken in our case as justified, because the primary lesion and the zoster belong to two nerve centres, whose plexuses are connected by the most extensive communications.

MORGAN DOCKRELL, M.A., M.D.

ARTICLE 76.

DR. UGOLINO MOSSO ON THE THEORY OF FEVER IN RELATION TO THE CEREBRAL HEAT-CENTRE.—A STUDY OF THE ACTION OF ANTIPYRETICS.*

THIS long paper is divided into four parts, viz., (1) Alterations of temperature after cerebral injuries in dogs; (2) The theory of heat-centres; (3) Calorimetric estimations; and lastly (4), The theory of fever and the action of antipyretics.

1.—Ricket, Aronsohn and Sachs, Girard, Isaac Ott, Sawadowski and others have recently formulated the theory that there exist spinal heat-centres in the brain in rabbits, injury to which is followed by rise of temperature. But rabbits do not appear to be the most convenient animals, for their temperatures are very easily raised. Golgi found that merely keeping a rabbit three hours and a half in a chest, at a temperature of 35° C. caused a rise of 7° in the animal. The author's experiments were made on dogs, the brain substance being injured in definite regions after trephining, by means of a needle, or if greater disturbance was desired, a glass rod. Although the temperature of the dog is not so variable as that of the rabbit, there is even here abundant room for error. A rise of temperature which is not constant has no value, and may be due to psychical causes. In one case, more than half the total rise of temperature occurred before the cerebral injury was inflicted, having begun even before trepanation.

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* *Arch. p. Exp. Path. u. Pharm*, 1890, Bd. 26. Heft. 5 u. 6.

Forty-two experiments were made on dogs, after trephining superficial injuries in various parts caused no constant rise (of temperature). But extensive lesion of the cortex in the anterior parts of the cerebrum caused a considerable rise. The same result followed lesion also of the white matter of the occipital convolutions. The rise of 1·3° C. obtained in these experiments does not warrant the inference that a heat-centre exists, because a similar rise sometimes followed simple trepanation. In one case the latter caused a rise of body-temperature to 40° C., and it fell in an hour and a half by 1·5° in spite of extensive injury to the white substance of the brain. The author found that in dogs, lesions of the cerebral cortex have no influence on the temperature in the rectum, and thus he differs from Wood and Richet. As regards the corpora striata and lenticular nuclei, Aronsohn and Sachs have stated that the greatest elevations of temperature in rabbits were obtained after injury to these parts. This result was not observed by the author in dogs. If the injury was on one side, the rise obtained was only a small one, and only lasted a few hours; if the above parts were injured extensively on both sides, without causing hemorrhage with the lateral ventricles, there was also a slight rise, but the variations from the normal were unimportant, and the temperature always soon fell. The theory of a heat-centre is as little supported by experiments on the thalamus opticus; in fact, high temperatures were only obtained in four dogs out of the whole forty-two.

(2). The second chapter, viz., on the theory of heat-centres, begins with a historical introduction, in which all recent experiments on this subject are mentioned. Girard, in his last work, comes to the conclusion that the central regions which are connected with the regulation of the heat of the body are very numerous, and that this regulation is due to a very complicated central apparatus. The author greets this conclusion with joy, and says in a foot note thereunder:—"I am convinced that the so-called regulatory heat-centres will meet with the same fate as the vaso-motor centres and those of breathing; if such centres exist, they will be found not only in the brain, but also in the spinal cord, in fact, wherever there is accumulation of nervous tissue." The experiments of Goltz and those of Corin and von Beneden lead to the conclusion that there are no special heat-centres in the brain exclusively devoted to the regulation of the body-temperature. The author remarked two facts in his experiments on rabbits:—(1) The elevation of temperature after injury to the brain is never so great but that subsequent cocaine injections will make it still greater. (2) The lowering of temperature which follows some cerebral lesions cannot be due to paralysis of a heat-centre, because the injection of cocaine will cause the temperature to rise again. Heat is quickly developed in the animal organism. In a dog, to which was administered strychnine, after curarisation to immobility, the temperature rose 3° C. in 2 hours and 40 minutes, and in another experiment the injection of cocaine caused a rise of (rectal) temperature of 4·7° in only 45 minutes. Such elevations must be obtained by the upholders of the heat-centre theory in their experiments, by destruction of various parts of the brain, or wherever they assume these centres to exist. Ricket has observed that rise of temperature in experiments on rabbits was in direct relation with the excited condition of the animal, and the author found that in some aged dogs a rise of 2°, and even 3° C. was obtained simply by binding the animal down.

(3) In the third chapter, the author describes a new calorimeter of his own, and examines the measurements used by others The author's instrument registers lowered as well as raised temperatures. The temperature is also shown in a very short time. Further, the amount of CO_2 and H_2O yielded by the respiration of the animal can easily be estimated, and the exact quantity of air necessary is thus indicated. The CO_2 and H_2O are removed as fast as formed, and not allowed to accumulate. As to the estimation of the oxygen used up, it must be remembered that Pettenkofer and Voit have shown that the CO_2 excreted is not always in direct proportion to the O consumed; *e.g.*, during sleep and during absolute rest, the animal consumes more O and excretes less CO_2.

The author endeavoured to ascertain, by his calorimeter, whether the rise of temperature in fever is due to increased heat-production, or diminished loss of heat. Pathologists incline to the latter alternative, though not denying the possibility of the former. The author found, without exception, that whenever the rectal temperature was raised, the heat radiated from the body was also increased, and therefore has no doubt that, in the fever cases observed by himself, there was increased production of heat. Those authors who ascribe the febrile rise to simple retention of heat, must admit that the increased tissue-change, the increased chemical processes in the tissues, are the real cause of fever. Certainly the amount of heat given off is lowered through the action of the vasomotor nerves, as shown by Prof. Maragliano's experiments on the behaviour of the vessels in fever; but it is surely going too far to reduce the feverish process to a purely vascular phenomenon with diminished radiation of heat, and to ascribe the influence of antipyretics simply to their paralysing effect on the vasomotor nerves and the blood vessels. It is much more probable that this vascular influence is connected with some lowering and moderating action upon the chemical processes in the tissues. The calorimetric method is still imperfect and presents great difficulties, and Mosso does not attach much importance to the results obtained by it. The thermometer in the rectum is a more reliable guide.

(4) The fourth chapter is on the theory of fever in general, and the action of antipyretics. In 1887 works were published advocating the idea that antipyretics (antipyrin in particular) acted as such in virtue of their influence on certain assumed heat-centres in the brain. Both Girard and Sawadowski found it necessary to assume several heat-centres, and their own words show the confusion and uncertainty in which the subject is involved. The author studied the action of antipyrin on feverish dogs. The fever was caused by bleeding. A dog who has lost almost half his blood shows first a momentary rise of temperature, or during the flow; then a second slow rise,

lasting some hours, often with rigors; and lastly, a steady rise to about 40° c., a sort of continued fever, lasting some days. This fever of hemorrhage has not hitherto been studied, and, except for the first part of it, due to nervous irritation, is hard to explain The previous injection of two grammes of antipyrin made no difference. In the next place, a pyogenic fever was produced in dogs by the injection of some cubic centimetres of fluid gelatine holding the staphylococcus aureus. At first some dogs showed slight lowering of the rectal temperature, but all showed a steady rise afterwards, reaching its maximum of 2° and more in a few hours. and remaining high several days, or till death. All the dogs died. Antipyrin injected in the stage of rise of temperature arrested the latter, or reduced it to normal for 6 or 8 hours. Cerebral lesions were now produced in these feverish dogs, at the sites of heat-centres indicated by other authors; but the temperature was neither lowered, nor much raised. Hence the fever caused by the staphylococcus aureus was not due to irritation of a "centre," for destruction of assumed sites of centres caused no diminution of the fever, nor to paralysis of a regulatory centre, for destruction of the latter caused no significant rise. Lastly, "cocaine fever" was produced in dogs. Of all known pyrogenic, or fever producing substances, cocaine has the quickest and strongest action. The febrile rise is not due to convulsions caused, for it precedes them; it also occurs in curarized animals. Now, antipyrin was found to have no influence, whether administered before the cocaine or after it. These experiments prove that the action of antipyrin cannot be directed against a part of the nervous system on which temperature depends. The proof is indirect, but cogent.

The author then asks the question:—"Is fever a nervous phenomenon?" Fevers vary much in type, mode of origin, and behaviour towards antipyretics; their true nature is not yet known. Experiments in 1886 showed that:—(1) Cocaine and strychnine have no influence on temperature after large doses of chloral hydrate. (2) Curare, which paralyses the muscles, has only a slight influence on temperature. (3) Chloral lowers temperature much more than curare, although it does not act upon the muscles.

Some place the power of producing heat in the muscles (Chauveau). The author does not think that this power is confined to any special tissue, whether nervous or muscular, but is the property of every living cell. The fever may be of purely nervous origin, the muscular system not participating; of this kind is the fever after severe hemorrhage, or after the use of cocaine. On the other hand, the fever caused by the staphylococcus aureus is independent of the nervous system, being essentially a fever of the tissues. In the former case the origin is central, in the latter, peripheral. Chloral hydrate prevents the characteristic rise of temperature after cocaine, while it has no effect on the fever caused by the staphylococcus. Now, the latter does not act more intensively than cocaine, hence two distinct modes of development of heat must be assumed, the one dependent on the nervous system, the other independent of it.

E. J. EDWARDES, M.D.

A LADY house surgeon has been appointed to the Belgrave Hospital for Children. She is Miss Frances Dickinson, M.B.Lond., and the Hospital Committee, on recommendation of the Medical staff, elected her as house surgeon for a period of six months.

ARTICLE 77.

ROHRBECK ON THE QUESTION OF DISINFECTION BY MEANS OF STEAM.[*]

THE result of the more recent investigations of Esmarch,[†] Flügge, Gruber,[‡] Heydenreich,[§] Kitt,[||] Bujwid,[¶] Salomonsen and others, are in complete agreement that sterilization by means of hot air is not nearly so complete a guarantee of the destruction of bacteria as when steam is employed. It is only as to which method is the best for the application of steam that any difference of opinion exists. Koch, Gaffky, Löffler and Esmarch recommend the use of currents of (moist) steam at 100°, whilst von Nägeli, Pasteur, Hueppe, Heydenreich, Globig and others particularly insist that steam heated above 100° disinfects with more certainty.

This is a contradiction to which the communication of Gruber in the *Centralbl. f. Bakte.*, iii., 1888, No. 20, p. 634, offers no solution. Gruber undertook the investigation as to the quickness of the penetration of the heat into the interior of the object to be disinfected, when hot air, saturated steam at 100°, and unsaturated steam at 120° were respectively used for disinfection purposes, but his report contained no detailed account of the effect of saturated steam at a higher temperature than 100°. From all previous experience it appears that saturated steam is the chief agent, and that heated steam is no more certain in its action as a sterilizing agent than hot air.

Esmarch shewed in the *Zietschr. f. Hygiene*, bd. iv., s. 197, without possibility of contradiction, that anthrax spores are killed in dry steam at a temperature not lower than 150°. From the same series of experiments he shewed that saturated steam at a higher temperature than 100° acted quite as well as a disinfectant (saturated steam at 110° was successful) in killing anthrax spores.

A like result, viz., that steam above 100° disinfects as certainly and quicker than steam at 100° the experiments of Globig have succeeded in establishing, since spores of the red potato bacillus are at once killed by saturated steam at 130°, whilst they are killed after two minutes in steam at 127°, after three minutes at 126°, after ten minutes in steam at 122°, after 25 minutes in steam from 113°-116°, and survived a stay of three-quarters of an hour in steam at 109°, whereas they were first destroyed after five-and-a-half to six hours in currents of steam at 100°.

Esmarch's experiments do not contradict those of Globig, but rather give the best explanation of the seeming contradiction with respect to the question of disinfection.

Whilst the steam used by Globig, even at different (high) temperatures, still remained wet and saturated, Esmarch employed steam at different temperatures, sometimes moist and saturated, at other times dry and superheated. Since Esmarch again heated the steam after its production, he worked with overheated dry steam. In the experiment in which he first saturated the anthrax spores and allowed steam at 110° to act, it was saturated steam at 110° which killed the spores. The qualities of the steam are not determined by the temperature alone, as, at the same temperature, steam may be moist and saturated, or dry and superheated. If one, for example, heat water to boiling in Nägel's kettle, without entirely removing the air, one has in the apparatus an over-pressure before the thermometer reaches 100°, and still before it indicates the temperature which is proper to the pressure of one atmosphere. The steam escapes through the ventilator with this over-pressure. In an experiment of this kind the manometer in connection with the kettle indicated an over-pressure of three-quarters of an atmosphere, although the thermometer stood at 90°, and before it reached 100°, the over-pressure within the kettle was over one atmosphere.

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[*] Berlin, *Central blt. f. Bakteriologie*, vol. vi., Nos. 18 and 19.

[†] *Zeitch. f. Hyg.*, bd. iv., 2 s. 197; bd. ix, 3.

[‡] *Central blt. f. Bakt.* bd, iii., 18 u 20.

[§] *Ibid*, bd. ii., 17, *u Zeitsch. f. Weissensch. Microskopie*, b.

[||] *Ibid*, bd. iii., 19.

[¶] *Ibid*, bd. iii., 3.

If one heats the water again in the same kettle, with the same flame, and then closes the apparatus after the steam has streamed out for some time (by these means the air is driven out of the kettle), the manometer shows the tension of the steam corresponding to the temperature, with an over-pressure of one atmosphere. The thermometer rises to 121·7°, *i.e.*, to the temperature which corresponds with the tension of the saturated steam. Not only so, but the manometer connected with the kettle behaves itself in such a manner as to show that when the steam is overheated it is also dry. In such a case the thermometer shows a much higher temperature than that which corresponds to the pressure of saturated steam. As the flame of the burner is made to strike the kettle at the side, the temperature of the steam rises to 108° before the manometer registers an over-pressure, and at 119° the over-pressure amounts to scarcely more than one-fifth of the atmosphere. This experiment succeeds with a steam kettle without special trouble. As the steam is let off at the over-pressure of one-fifth of an atmosphere, the temperature falls only slowly and the thermometer still shews 110° when the over-pressure in the kettle is almost sunk to 0. It is needless to observe that the good order both of the manometer as also of the thermometer must be previously tested, and all sources of error excluded.

The formation of steam in Nägel's kettle may vary under different circumstances. The digester must be very strongly made, in order to withstand high pressures, and it is natural that, through their conductivity, the walls of the apparatus when strongly heated can overheat the steam formed above the fluid. By the raising of the temperature 1° gases extend themselves $\frac{1}{273}$ of their original volume. At an initial pressure of one atmosphere the pressure of over-heated steam increases to 2·07 mm., whilst in saturated steam the increased volume is about 27 mm. If the pressure is observed to be greater than that which it ought to be for the corresponding temperature according to Regnault's researches, we have not pure steam. If the temperature is higher than the corresponding pressure, we have superheated steam, and only when the manometer registers the pressure corresponding with the temperature is the steam pure and saturated.

One must not be surprised, then, that steam acts according to physical as well as to physiogloical laws. On these grounds the results of sterilising in steam differ, and the opinions about sterilisation and disinfection in Nägel's closed kettle apparently contradict one another. If we call the dry steam, water gas, since its physical behaviour approaches that of gas, we can say: *saturated steam is a good sterilizer; water gas is a bad sterilizer.* To express this in the language of physics, the *power of disinfection is only possessed by steam of maximum density for the corresponding pressure.*

As hot air is much less powerful than steam, it exercises a disturbing influence which, from the researches of Heydenreich, and the interesting experiments of Gruber, is sufficiently established. It may here be remarked, with Hueppe, that a long time is necessary for disinfection by means of the steam sterilizer, and that it is necessary at first to let the steam stream out and to close the plug when the apparatus contains pure steam. It is, in truth, easier to obtain a saturated steam at 100° than at above 100°, and so where disinfection has to be done by unpractised hands, it is best to employ a steam apparatus without an arrangement for over-pressure. Saturated steam at a high temperature produces quicker disinfection, and also a higher pressure than that which Globig's research showed to be the best, and therefore for disinfection in gross, apparatus with high pressures are the most rational and effective so long as the formation of dry steam is avoided and the air is entirely and certainly removed.

Further communications upon this subject and a description of a new disinfection apparatus constructed upon the principle are postponed.

VINCENT D. HARRIS, M.D.

ARTICLE 78.

THE INTERNATIONAL CONGRESS FOR MENTAL MEDICINE, PARIS, 1889.*

THE following is a brief account of the proceedings of the congress, as reported to the Société Medico-Psychologique, by M. Ritti:—

The nine sittings of the congress took place from August 5 to 10, in the great amphitheatre of the College of France. M. Fabret, the president, opened the proceedings with a historical discourse, indicating the progress of mental medicine since Pinal and Esquirol. The Belgian Society of Mental Medicine put forward a scheme for an international classification of mental diseases, which was adopted almost unanimously. The committee of organisation of congress had put forward this subject for discussion, viz., "Les obsessions avec conscience (intellectuelles, émotives, et instinctives)," (conscious mental derangements—intellectual, emotional and instinctive). M. Fabret, who was charged with the report, summed up the common character of the above as follows:—1. They are all accompanied by consciousness on the patient's part. 2. They are all hereditary. 3. They are essentially remittent, periodic, and intermittent. 4. They are not isolated in the mind, as in monomania, but are propagated to the more extended sphere of intelligence and morality, and are always accompanied by anxiety, internal struggle, hesitation in thought and act, also physical symptoms of emotional character. 5. They never present hallucinations. 6. They preserve the same psychic characters during the whole life of the patient, despite frequent remissions, and are not changed into other mental diseases. 7. They never culminate in dementia. 8. Rarely, they may be complicated with the delirium of persecution, or perhaps the anxious, melancholic delirium of an advanced period of the disease, while still possessing their primitive character.

M. Cotard sent a paper "On the Psycho-motor Origin of Delirium,"† which caused much discussion. Delirium once created may persist after cessation of the cause which called it forth. The old adage, *Sublatâ causâ tollitur effectus*, does not hold good in morbid psychology.

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* *Annales Med. Psychol.*, No. 1, 1890.

† His subsequent death is deplored.

M. Seglas's paper was on "Doubling of the Personality," and on "Verbal Psycho-motor Hallucinations," So far, the papers have been purely theoretical; to these succeed some of a clinical character.

M. Korsakoff (Moscow) read a paper "On a Peculiar Form of Mental Disease associated with Multiple Degenerative Neuritis." There were in this case disturbance in association of ideas, confused consciousness, and amnesia for recent facts.

M. Regis discoursed "On the Differential Diagnosis between Hypochondriac Lypomania and General Paralysis," confirming Cotard's idea that the peculiar hypochondriacal delirium of general paralysis may be met with in "anxious" melancholia.

M. Bettencourt Rodrigues (Lisbon) read a paper on "The Influence of Symptoms of Auto-intoxication, and of Gastric Dilatation, in the Ætiology of Depression or Melancholy."

M. Saury's paper was on "Multiple Insanity." Lasegue first put forward the idea of several delusions in the same person, and Magnan, Paul Garnier, Dericq, Pichon, etc., have written on the same subject.

Hypnotism had its congress to itself; but some papers of "hypnotic" character found their way into the present congress, *e.g.*, M. Jules Voisin on "Hysterical Attacks of Unconsciousness contrasted with True Epilepsy."

M. Ledame (Geneva) and M. Tissié (Bordeaux) also read papers, which were followed by a lively discussion, *pro* and *contra* hypnotism, and the treatment of mental perversions by "suggestion."

"Hyoscine as a Hypnotic" was the title of a paper by Lemoine and Malfilâtre. "General Paralysis" was discussed by M. Daniel Brunet, but Professor Ball and others declared their hesitation as to the enormous doses of potassium bromide, carried sometimes to 40 grammes, advocated by Brunet. Various surmises on the ætiology of general paralysis were presented. M. Georges Lemoine regards "anthritism" as a cause—a new idea that was favourably received. Again, alcoholism is one cause of peri-encephalitis, and M. Paul Garnier, in his interesting statistical researches into insanity in Paris, has found alcoholic insanity and general paralysis increase rapidly and *pari passu*. This shows the ætiological influence of alcohol in the development of chronic interstitial encephalitis—a view sharply criticized by Ball, Doutrebente and Regis, but as ably defended by Semal and Garnier. As to the connexion between *general paralysis and syphilis*, Ramedier and Christian (especially the latter) deny its existence. M. Regis is the champion of the opposite opinion. M. Mabella's paper embodied ideas between these two extremes, and M. Gilbert Ballet proposed an international enquiry into the causes of general paralysis, which was unanimously adopted. M. Mabille's paper was on "Pulmonary Sclerosis in Epileptics." Bourneville and Camescasse sent in a paper on microcephaly, and Bourneville and Sollier one on porencephaly.

The "Responsibility of Alcoholics" was a subject entrusted to M. Motet, and the congress formulated the general opinion as a vote that special establishments should be formed for purposes of treatment, not repression. The vote of the congress of 1878 on the necessity of the creation of special asylums for criminal lunatics was renewed by the present congress.

Two papers came from America, one by Dr. Crothers, on "Alcoholic Automatism in Criminal Cases;" the other by Dr. C. Bell, on "Monomania." M. Sunal (Mons) read a paper on "Penitentiary Insanity," a subject which he has made a special study of. The congress voted the desirability of an official inquiry into the question of the mental condition of criminals in general; 2 The creation of a clinic of criminality. On the programme subject, "Comparative Legislation on the Placing of the Insane in Special Establishments, Public and Private," M.M. Ball and Rouillard reported, and their inquiries were followed by a remarkable debate. M. Barbier, first president of the Cour de Cassation, strongly protested against the making the magistracy responsible for the placing of the insane. "A sad present to make to it," he declared. The recent French law on insanity was further discussed, and M. Monod gave an account of recent departmental inspections of asylums made by him.

It was decided that the congress should meet annually, and the next place selected was Rouen.

E. J. Edwardes, M.D.

Article 79.

REPORT ON ORTHOPÆDIC PROGRESS.

Flexure of Neck of Femur—not due to Hip Disease.[*]

A flexure of the neck of the femur, not due to hip disease or epiphysitis, is described as occurring in adolescents of from 14 to 18 years, by Dr. Bruns. The symptoms of the deformity are obscure, and the course neither rapid nor severe. It is observed that the trochauten gradually gets more raised, and that there is some external rotation at the joint movement, these being slightly limited.

On measurement there is found a distinct shortening, and Dr. Bruns holds that this cannot be due to anything except to an alteration of the direction of the neck of the femur. He considers that it may be a form of late rickets.

Hip Disease. [†]

From *The International Journal of Medical Sciences* we learn that in the treatment of hip disease, a combination of extension and immobilisation, as is afforded by a Thomas' splint and a Taylor's hip splint combined, is finding great favour. In this country a similar principle of treatment is not at all rarely adopted, although it may be attained in a different way. Both Dr. R. M. Phelps, of New York, and Dr. Lovett, of Boston, urge the adoption of the above combination of splints as being the best way of securing extension with immobilisation, as opposed to extension with motion.

Operation for Anchylosis of Knee in Paralysis. [‡]

In certain cases of infantile paralysis, where a helpless flail-like leg has resulted, Dr. Smith recommends an operation for resection at the knee joint in order to secure anchylosis. He advises a transpatellar incision and wire tibio-femoral sutures to avoid further shortening; only a thin slice of cartilage is removed from the end of the femur.

Excision of Spina Bifida. [§]

Dr. Carl Bayer, in *The Prager Med. Wochen.*, No. 20, p. 227, recommends the treatment of spina bifida by incision first, and then excision of the meningeal sac, and reports a case of a 10 days old infant with a meningocele of the size of an apple.

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[*] *Beitrage fur Klin. Chirurg.* Bd. iv., Sept. 1, 1888.

[†] *International Journal of Med. Sciences*, Sept., 1889.

[‡] *Medical Record*, April 6, 1889.

[§] *Prager Med. Wochen.* No. 20, p. 227.

The sac of the meningocele was exposed, and opened freely. The cauda egisma was found spread over the posterior surface of the sac; it was separated from it, and replaced in the canal. The sac was then cut away, and the sides of the dura mater stitched together. The wound in the muscles and superficial parts was closed. The case did well.

The first volume of the "Transactions of the American Orthopædic Association" contains a number of papers more or less closely bearing upon orthopædics proper. Both in the treatment of deformities of the back and of the limbs the employment of mechanical apparatus seems to be more general than in this country.

Round Shoulders. [*]

Thus Dr. Stillman has an illustrated article on round shoulders, in which he advocates, in the first instance, exercises upon what he terms a "horizontal curved traction frame," upon which the patient lies with the head extended by a weight and pulley and an ordinary chair and occiput bandage. The arms are exercised by other weights and pulleys

By dint of these and similar exercises, which seem fairly well adapted to produce the effects desired, Dr. Stillman states that the deformities of stooping can be much improved, but continues that, for this improvement to be maintained, it is advisable to apply a steel mechanism, designed "to keep the patient in a state of hyper-erectness." This instrument seems to possess all the drawbacks peculiar to its kind, so far as we can judge from the illustration; and if the total result is that the round shouldered patient is enabled and obliged to wear an elaborate support, the outlook for her would not seem to be an encouraging one.

On the other hand, these transactions contain a short, vigorously expressed note by Mr. Barnard Roth, a corresponding member, "on the uselessness and harmfulness of shoulder straps, shoulder braces, *et hac* (*sic*) *genus omne*, for round shoulders, etc." He opposes the employment of apparatus and braces with great energy and force, showing that Shaw, more than sixty years ago, demonstrated the uselessness of such expedients.

Osteotomy. [†]

Osteotomy is treated of by Dr. Dixon Jones and Dr. Willard. The paper of the former includes a very lucid and readable account of the ætiology and pathology of rickets (spelt throughout the paper, by the way, *rhachitis*). He places the natural tendency to recovery in rickets at a very low figure, and condemns instrumental osteotomy as being tremendous and brutal. It appears, however, that he would perform osteotomy in cases in which many surgeons would be contented to treat with splints. Dr. Jones' paper includes a descriptive list of 158 successive osteotomies without suppuration.

In considering the question of the rectification of rickety curves, Dr. Willard says that manual fracture may be effected in children up to three years of age, but that afterwards osteotomy is to be practised from the increasing hardness of the bones.

Club-Foot. [‡]

A good general account of the treatment of club-foot is also given in these transactions by Dr. E H. Bradford. Open incision, as opposed to subcutaneous operation, is advised by him for the division of tendons, ligaments, etc., in severe or difficult cases. He also speaks favourably of the operation for division of the neck of the astragalus in advanced cases of egino varen.

Flat-Foot. [*]

Dr. Whitman analyses the results of treatment of 75 cases of flat-foot, and describes a brace of thin tempered inflexible steel to be worn under the foot, inside the boot. It must be fitted on a plaster last of the sole. It is not easy to see in what respects this arrangement differs from the well known metal volgus plate.

ARTICLE 80.

CRANIAL INJURIES IN RELATION TO MENTAL DERANGEMENT. [†]

DR. J. CHRISTIAN, the physician of the Asylum at Charenton, has a well written paper on this subject. After giving some account of the observations of previous writers, he presents an analysis of 100 selected cases which came under his own observation. The manner in which the injuries were received was of the most diversified kind. Dr. Christian observes that injuries to the head are much less likely to have serious consequences with children than with adults, hence, as his table shows, it is rare to meet people in asylums whose insanity can be attributed to injuries of the head in childhood. The following table gives the time which elapsed between the time of the accident and the insanity:—

	Insanity (Folie)	General Paralysis	Dementia	Epilepsy	Total.
From 1 to 5 Years	17	23	8	6	54
,, 5 to 10 ,,	6	7	4	4	24
,, 10 to 20 ,,	3	4	2	2	11
,, 20 to 30 ,,	2	4	1	0	7
More than 30 ,,	1	5	1	0	7
	29	43	16	12	100

The author calls attention to the extreme complexity of the cerebral functions. The injury is scarcely ever the sole cause of the insanity. Very often there are predisposing causes more or less efficacious.

Dr. Christian gives two examples to show how cases may differ.

A man who had an insane mother reached the age of 30 with unimpaired intelligence. He then falls heavily on his head, but recovers and returns to business. It is remarked that he is not the same man, and some years after he becomes a general paralytic. In this case could it not be said that the fall on the head was the determining cause of the general paralysis, from which the patient had every chance of escaping, notwithstanding his hereditary predisposition?

Take another example. A man, 40 years of age, without any hereditary predisposition, and who has always enjoyed good health, received some blows on the head from a stick. He recovers from the injury, and all traces of it disappear. Two years after, he loses his only son, falls into a state of profound melancholy, and dies a general paralytic. May it not be asked whether this man would have had the strength to overcome his grief if his brain had not been previously shaken by the injury to the head?

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[*] "Transactions of the American Orthopædic Association.

[†] *Ibid.*

[‡] *Ibid.*

[*] "Transactions of the American Orthopædic Association."

[†] *Archives de Neurologie*, No. 53.

Certainly there is matter for discussion, and one could make many other hypotheses. I wish only to establish that traumatism does not in general give to insanity any special character. That it either injures, more or less gravely, the brain, if no predisposition to disease exists, or, on the other hand, that it brings latent predispositions into play. Thus we see one kind or another of mental disease supervenes, mania, delirium of persecution, circular insanity, or dementia, epilepsy, general paralysis and also, sometimes, hysteria; not indiscriminately, but regulated by the nature and mode of action of other causes. It is only when the injury has an immediate action that it gives a special character to the resulting insanity.

An officer received some sabre cuts on the head at the battle of Sedan. He recovered and rejoined the service, but still suffered from brain symptoms, headache, giddiness and loss of memory. These symptoms becoming aggravated, ended in delirium and the patient was sent to an asylum. At first he had maniacal excitement, with ideas of grandeur which might make one suspect general paralysis. However, he had no noticeable trembling in speech, nor the usual talkative character of the paralytic, but rather a state of torpor. The disease did not take the course of general paralysis. For seven years the patient has remained in an almost stationary condition, quite unlike general paralysis. I have several cases in my hospital which resemble one another in a striking manner. The dementia has a character of its own. To make a more precise diagnosis I should say that it is chronic cerebritis, owing to an external injury. Dr. Christian observes that the prognosis is always grave when insanity supervenes. On an injury to the skull he considers it incurable, depending as it does on an alteration more or less profound, and more or less extensive, of the cerebral substance.

WILLIAM W. IRELAND.

Surgery.

RECENT PAPERS.

81. **BOKAI, Dr.**—On a Case of Urethral Calculus, followed by Croupous Urethritis and Cystitis. (*Archiv. für Kinderheilkunde*, bd. xi., hft. 1.)

82. **WALSH, Mr. J. H. TULL.**—A Case of Wandering Foreign Body (*Ind. Med. Gaz.*, Dec., 1889.)

83. **MANLEY, Dr. THOMAS H., M.D.**—On a Case of Malignant Growth in a Hernial Sac (Inguinal Variety), Operation; Recovery (*New York Med. Rec.*, Feb. 1, 1890.)

84. **DRESCHFIELD, DR.** — On Epithelioma of the Colon. (*Brit. Med. Jour.*, Feb. 1, 1890).

85. **CHEYNE, Mr. WATSON.** — Operation for Partially Descended Testicle. (*British Med. Journ.*, Feb. 1, 1890.)

86. **PATTESON, DR.**—A Contribution to the Pathology of Joint Bodies. (*Dublin Journ. of Med. Science*, Feb., 1890.)

87. **POUTAIN, PROF.**—On the Rapid Cure of Buboes by the Injection of Iodoform Vaseline. (*Le Scalpel*, Jan., 1889.)

88. **SMITH, Dr. A. A.**—On a Case of Recurring Phlebitis. (*N. Y. Med. Record*, Jan., 1890.)

89. **MANLEY, Dr.**—On Two Cases of Operation for the Radical Cure of Hernia. *Med. News*, Jan. 25, 1890.)

ART. 81. *Bokai on a Case of Urethral Calculus, followed by Croupous Urethritis and Cystitis.*—The patient, a boy, 3½ years old, was admitted to the Stefanie Childrens' Hospital, at Buda Pesth, on Aug. 2, 1887. He had had more or less trouble with his water for a year and three weeks, and owing, it was asserted, to catheterisation, it had dribbled. He was a well-nourished child, with nothing abnormal about his heart or lungs. The penis appeared natural, meatus urinarius small, bladder not enlarged. The sound entered the bladder with the greatest ease, but no stone was found, though the bladder-wall was trabecular. The urine, the passing of which was painful, was cloudy, of alkaline reaction, and was found on microscopic examination to contain bladder epithelium and pus. Temperature normal.

On the night of August 9 the rectal temperature had risen to 103°, but the next morning it had fallen to 101·4°. Patient restless, from having passed no water during the night: bladder distended, a small stone felt in front of the bulb. By means of a fenestrated ear scoop, the stone was brought forward as far as the *fossa navicularis*, and after dilatation was easily removed, though covered with blood. As the urine did not follow, the bladder was then emptied with the catheter. On August 11 the temperature was normal. The patient had, however, vomited several times, and there was some tenderness about the penis and hypogastrium. The urine, which was of a cystitic character, was passed naturally. August 12, temperature high and sustained, herpes labialis, respiration 50, alæ nasi working, dry and painful cough. On physical examination, infiltration of the lower lobe of the left lung was diagnosed. August 13, same high temperature. Urine dribbling, bladder distended. Urethra and bladder region painful, more so on movement. August 14, temperature the same. Catheterisation. Urine very ammoniacal. August 16, fever and pneumonia the same. A dirty white membranous deposit visible on the slightly swollen meatus urinarius, and traceable into the urethra, to the walls of which it was strongly adherent. The bladder was daily emptied and washed out with a solution of borax. General condition low. No further important change took place until August 20, when, during the examination, a complete membranous cast of the urethra, about three centimetres long, was passed, and the visible portion of the urethra resumed its normal colour. From August 21 to 29 the following changes occurred: fever, a little less; general condition, bad; strength, failing fast; pneumonia still present; complete retention of urine only partially relieved by the catheter, which, however, enters the bladder freely. On the 22nd, and again on the 27th, small membranous pieces were passed, and were followed by the discharge of about a teaspoonful of foul smelling, blood-stained pus. Bladder irrigation impossible. The organ itself so dilated as to reach to the navel. The outlook was so unfavourable that lateral lithotomy was performed. As soon as the bladder was opened, about a litre of stinking urine escaped, and with it, a complete membranous cast of the bladder. No stone was found. A drainage tube was left in. The next day the patient was wonderfully changed for the better, and the improvement continued. On September 9 the fever was much less, and the lung showed signs of resolution. On September 17 the temperature was normal, and the lung nearly so; the urine, however, all this time had never come through the urethra; a catheter was therefore passed, and with ease. On October 6 the perineal wound finally closed, micturition was normal, and the patient's general health excellent, and on the 15th, 74 days after admission, he was discharged, and has continued well ever since. The membrane was preserved in alcohol, and submitted to Dr. Hutyra for examination. He reported that it was croupous pseudo-membrane, the network of which contained much detritus, a group of micrococci and white blood corpuscles. [The author is to be congratulated on the favourable termination of this most difficult and interesting case. It is, perhaps, pardonable, to feel some doubt, however, whether the patient's condition was not due to diphtheria contracted in the wards attacking the wound in the urethra, spreading thence to the bladder, and being complicated with pneumonia. A croupous pneumonia lasting 60 days is surely very uncommon, but cases of long-continued diphtheria are not so very rare. There is no allusion to the condition of the throat, or to any search for the pneumono-coccus. *Rep.*] RALPH W. LEFTWICH, M.D.

82. *Walsh on a Case of Wandering Foreign Body.* —The author subjoins the following notes of a case of wandering foreign body. A Hindu male, aged 25, about three years ago was sitting under a date palm, when a large leaf fell upon him, and the spike-like end pierced the front of his right shoulder. The long thorn broke off and remained in the substance of the deltoid muscle. The thorn was not removed, but in the course of time the wound healed. The contracted scar remains visible in front of the shoulder over the deltoid. About a year after the healing of the first wound, a lump was noticed at the back of the shoulder; this burst after a time, and discharged for many months. On examination with a probe, a sinus was found, which passed along for a distance of one and a-half inches, and the probe then struck on a foreign body. The sinus was laid open, and out of the substance of the infraspinatus muscle the end of the date palm leaf was extracted. The piece removed was nearly three inches long, and more than a quarter of an inch thick at the base. H. PERCY DUNN.

83. *Manley on a Case of Malignant Growth in a Hernial Sac.*—The history of the case is as follows:—The patient was an Italian, aged 30. Fifteen years ago, after lifting a heavy weight, he felt a severe pain in his right groin, and this was followed by a swelling, which has since remained. The enlargement gave him no trouble until ten days before coming to the hospital, when, while raising a heavy stone into a waggon, he bruised the parts, and persistent pain has continued ever since. On examination, a swelling was found, of pyramidal form and stony hardness. It corresponded with the course of the spermatic cord in its upper part, and extended upwards into the inguinal canal. The patient was feverish, with quick pulse and coated tongue. Abdomen tympanitic and exquisitely tender. The bowels had not acted for four days, and on the day of admission vomiting had occurred three or four times. After a preliminary operation, undertaken by the house-surgeon, acting under orders by the author, who had left the hospital, the patient was placed in bed, and on the following morning the author reopened the wound and found, thoroughly incorporated with the coverings of an old incarcerated hernia, a new growth as hard as cartilage, extending from about four inches below, directly into and through the inguinal canal. The tumour lay immediately over the spermatic cord, with which it was ultimately adherent. A badly fitting truss had probably contributed to the general adhesion of the parts. In dissecting upwards following and stopping the growth of its coverings, it was found to extend into the peritoneal cavity. No strangulation of intestine was present, though the neck of the growth, as it emerged from the internal ring was firmly bound down till it was released by a free dissection. The mass was then cut off at the internal ring, and the operation completed by the McBarney method. The pain ceased immediately after the operation. On microscopical examination by Dr. Kneer, the growth was found to be a fibro-sarcoma of the omentum, of which latter structure the mass mainly consisted. The patient made good recovery. This case is almost parallel to one reported by Dr. Daniel Lewis, in the *N. Y. Med. Rec.*, Oct. 12, 1889.

84. *Dreschfeld on Epithelioma of Colon.* — The following case, related by the author, contains some features of interest. A gentleman, aged 64, suffered for upwards of seven years from persistent and profuse diarrhœa. The diarrhœa was not associated with tenesmus. The stools often amounted to more than twenty in the course of the day; the evacuations were pale, very fœtid, and never contained blood. Treatment was unavailing. Beyond the great inconvenience, the health of the patient suffered but little for a long time; his appetite remained good, and he was able to take large quantities of food. Latterly he lost flesh, and complained of pain in the right hypochondriac region. A fortnight before death symptoms of intestinal obstruction supervened, the diarrhœa ceased, persistent vomiting of mucus and bile came on, which became stercoraceous a few hours before death. *Post-mortem* showed extensive distention of the cœcum, and ascending colon; the mucous surface was the seat of numerous superficial ulcerations with clean cut edges. The ulcerations extended to the hepatic flexure of the colon, where they abutted against a new growth which was about three inches in length, passed circularly round the short axis of the transverse colon, was soft and gelatinous in consistency, and had caused marked obstruction to the lumen of the large bowel. The other organs were unaffected; the tumour proved to be a cylinder-epithelioma, which had undergone mucous degeneration. The author, in commenting on the case, observes that it looked like one of chronic catarrhal dysentery. It presented many abnormal and rare features, to wit, the absence of blood in the stools, of tenesmus, and of thickening and stiffening of the affected bowels; the limited extent of the affection, and the presence of the cancerous mass, which was evidently of more recent date than the catarrhal affection, and, probably, resulted from the hypertrophied and proliferated Dieberkühn's glands at the border of the ulcerated tract.

85. *Cheyne on an Operation for Partially Descended Testicle.*—The notes of this case were read at a meeting of the Medical Society on Jan. 27, at which the author shewed the patient, a lad aged 12, whose testis on each side was originally contained in the inguinal canal. The first (on the right) was liberated and sutured to the bottom of the scrotum, but, as was usual, contraction of the cord took place, and the tester was pulled up near the external ring. A modified procedure was then adopted with the other. Ten months later a stitch was passed through the cord just above the testis, carried through a hole at the bottom of the scrotum, and tied to a projecting

bar on a wire frame fixed in the perineum. By this means constant traction was kept up on the cord in order to bring about a stretching. The stitch was removed on the eleventh day, and the result was highly satisfactory.

86. *Patteson on the Pathology of Joint Bodies.*—Dr. Patteson read a paper before the Royal Academy of Medicine, Ireland, on the pathology of joint bodies. The obscurity involving the pathology of loose bodies in joints is shown by the manifold theories to which they had given rise. Excluding foreign bodies, various authors had enumerated the following varieties:—Fibrinous, lipomatous, fibrous, fibro-cartilaginous, cartilaginous, osteo-cartilaginous, osseous, traumatic, and necrotic. He exhibited a specimen of a foreign body removed by Mr. M'Ardle from the knee-joint of a young man aged twenty-four. Eight years previously a small body appeared on his knee; it lay to the inner side of the ligamentum patellæ, and as it continued growing and giving rise to attacks of pain, three years ago, he dislodged it into the joint in the hope of relief. It was then the size of a bean, and found a resting-place in the supra-patellar pouch. As it continued to increase in size he was admitted to St. Vincent's Hospital, under the care of Mr. M'Ardle, who removed it. The patient made a good recovery. The body was found to present an irregularly-oval shape, reminding one of a small patella. It had one surface entirely cartilaginous, and one composed of a bony centre surrounded by a marginal collar of cartilage. Its length was 28mm., its breadth 22mm., its thickness 11mm. A median section showed it to be made up of an oval bony nucleus, covered on one side by a crescentic disc of cartilage. The exposed bony surface showed distinct patches of rheumatism. No traces of attachment, or of a pedicle, could be detected. Microscopically the cartilage resembled diarthrodial cartilage. except in possessing a more actively proliferating middle zone; it was covered by a cellular fibrous envelope, resembling the reflection of the synovial membrance, which also filled the depressions on the bony surface. The bone was of cancellous type, the trabeculæ, however, being denser than normal. Fibrous metaplasia of the medulla and cartilaginous transformation of the bone occurred in parts. Two points chiefly suggested consideration—the mode of origin and the mode of growth of these bodies. Attention was directed to the valuable researches, pathological and experimental, of MM. Poulet and Vaillard, who found that the majority of loose bodies corresponded in structure with the osteophytes formed in chronic rheumatic arthritis, which had become separated either by fracture or by a pathological process. Arguments in favour of this casual relationship were advanced from various sources, and the question of increase of size after complete liberation in the joint was discussed. The conclusions arrived at were summarised as follows:—1. In the majority of cases loose bodies of mixed bony and cartilaginous nature are *wandering osteophytes*, and are evidences of a latent rheumatic arthritis. 2. This form of chronic rheumatic arthritis is insidious and latent in character, occurs in young persons as well as those more advanced in years, and is chiefly manifested in "lipping" of the articular margins, and in the formation of ecchondroses and osteophytes which, while attached, cause no symptoms. 3. These bodies, after liberation in the joint, may, and do often, undergo considerable increase in size, their nutriment being derived from the synovial fluid. This fact points to the necessity of their early removal by operative interference.

87. *Poutain on the Rapid Cure of Buboes by the Injection of Idoform Vaseline.*—Professor Poutain claims to have been enabled to obtain excellent results in the treatment of buboes by the injection of vaseline impregnated with iodoform, which makes a kind of permanent iodoform dressing in the interior of the ganglion. His operation is as follows:—1. Antiseptic cleansing of the parts with solution of sublimata (1-1000). 2. Puncture with a lancet if the skin is thin; with a bistoury if the pus is deep seated. 3. Evacuation of the pus, with complete expression of the liquid contents. 4. Injection of liquified vaseline containing iodoform. 5. Dressings of bichloride cotton wool. The puncture need not be made in a dependent position; as there is no subsequent flow, it should be central, so that the pus may be forced into it from all sides. The evacuation of the pus should be complete but gradual. The pain, if present, may be relieved by the injection of a few centigrammes of cocaine around the bubo. After the expression of the pus a few syringefuls of the sublimate solution should be injected, to wash the walls of the sac. The iodoform vaseline is then gently injected from a glass syringe previously charged and kept warm in water. The cavity of the bubo should be filled but not distended. Immediately after the injection, and before the fluid has an opportunity to return, a cold dressing of cotton moistened in sublimate solution is applied and kept in place by a spica bandage. This process renders occlusion nearly complete, because the cold application causes the vaseline to congeal in the lips of the wound, where it forms a plug. The dressing also aids in the occlusion. He states that after the first day all pain disappears and improvement takes place so rapidly that cure without cicatrization takes place, upon an average, in six or seven days. In some cases it is necessary to renew the vaseline. In three months forty-one buboes were treated by this method. In more than half of this number there was a cure, on an average, in less than five days; the longest time required was twenty-three days.

88. *Smith on a Case of Recurring Phlebitis.*—The patient, an Englishman, was engaged in business in London and New York. In October, 1879, while returning to London from New York, on the steamer, within two days of Liverpool, he was seized, while walking on deck, with a severe chill, accompanied by decided pain in the right leg. The pain was on the inner surface, extending from a point mid-way from the groin to the knee, over the track of the saphenous vein. The next morning there was swelling of the leg and foot and a feeling of stiffness and considerable pain in the leg above the knee. He recovered from this attack in three weeks and resumed his business. Three months later he was seized at the dinner-table with pain in the left leg, in about the same situation, and with the same characteristics, except that it was more severe, and the leg began to swell within an hour. The following day it was swollen to twice its normal size. He was again treated in the usual way, and in about three weeks all acute symptoms had disappeared. The swelling in the leg never resumed its natural size. The first day he began to move about; after the second attack he developed a pneumonia, which was probably due to a thrombosis. He was very ill for six weeks, but gradually recovered, and by June, 1880, had recovered his usual health, except the swelling in the left leg. and a moderate degree of tenderness over the course of the saphenous vein above the knee. He was first seen by Dr. Smith in October, 1885. He then was suffering from an attack of acute

phlebitis affecting the long saphenous vein on the left side, both above and below the knee. The attack was ushered in by a mild chill, and occurred after a period of three days of great mental anxiety and physical exertion in connection with his business. He was at that time forty-six years old, and had never had a day's illness up to the time of his first attack. He had always been a rather generous liver, and for twenty years had been an inveterate smoker. His attack yielded in a short time to the usual treatment. He said he had never had syphilis, nor gout, and he had not received an injury. His urine only contained urates. Just after this attack he had pain and swelling in his tendo Achillis and its attachment, which yielded quite readily to anti-gout treatment. He returned to England a few weeks later. Dr. Smith did not see him again till September, 1889. He had remained well most of the time. On two or three occasions he thought he was threatened with an attack of phlebitis. On such occasions he would take the anti-gout pills and the iodide for a few days. This seemed to ward off the attacks. At all events, he had had no attack until the one in September. He had developed the attack after unusual mental exertion and exposure on a sleeping-car. It came on, as two previous attacks had done, with a slight chill. This time it affected first the saphenous vein below the knee, gradually extending up above the knee, the portion above the knee becoming affected after it had partially subsided below. It affected the superficial epigastric vein in the wall of the abdomen a few inches above the groin. Since recovery from the acute symptoms of this last attack he had been steadily taking iodide, and about once a week an anti-gout pill. In view of the fact of the urates being abundant in his urine during the most of the time of the attack, his diet was carefully regulated. The principal points of interest were:—The frequent recurrence, the lack of an easily recognised cause, the first attack occurring in a man of excellent physical vigour; no injury, no disease in tissues about the veins, no blood-poisoning. In most cases of gouty phlebitis it has occurred in cases in which the manifestations of gout were unmistakable. The author asks whether this case is to be included among the cases of so-called gouty phlebitis?

89. *Manley on Two Cases of Operations for the Radical Cure of Hernia.*—The first case presented for operation was one of strangulated inguinal hernia. The patient, a strong man of twenty-four years, gave a history of having noticed a swelling in the left side since he was six or seven years old. He had worn a truss almost continuously until two years ago, when he found that after having left it off the hernia did not reappear. One afternoon it came down and could not be returned, and the patient came to the hospital for relief. There was great pain, with constant vomiting and collapse. all pointing to strangulation. The operation was begun by the long, free incision. On reaching the deeper structures it was at once manifest that the case was one of the congenital variety. There was no true sac. The immense mass of extruded omentum lay in opposition to the tunica albuginea of the testicle, but was not adherent to it. Dr. Manley therefore decided to perform a modified Macewen operation, on what might, perhaps, be designated a "McBurney-Macewen operation," to ligate the sac off without sacrificing the testicle, and fill in and obliterate the greatly enlarged space between the pillars of the ring. In order to do this, after ligating and cutting away the superfluous omentum, the remaining stump was fixed in the canal with the quilted suture, after the plan of Macewen, while the remainder of the operation was completed after the McBurney method—the cutaneous margins of the wound sewed down to the peritoneum, and the whole treated by the open method. The second case for operation was a boy of seven, who had had his hernia since birth. There was a protusion that increased in size with the boy's growth, that could not be reduced. Its growth was rapid, and before admission became so prominent, under the trowsers, that it attracted notice. Thorough antisepsis being observed, the operation was commenced with the usual long, free incision over the line of the spermatic cord, from the internal ring downward. Here, as in the preceding case, there was no sac, but after freely opening the tunica vaganalis, which invested the protruded mass, it could not be replaced in the abdomen with ordinary taxis. The enlargement consisted of nearly twelve inches of intestine. It was found, on careful examination, that the reason the gut failed to return was not resistance from above, but because on its mesenteric border the vas deferens, the epididymis, and testicle were in one confused mass, all bound rigidly to the intestine by organized fibrous tissues which had to be divided with the scissors. After having thoroughly freed the bowel, the atrophied testicle was removed high up, when the gut itself was returned and the peritoneal cavity closed, by ligating off the fascia propria on a line with the internal ring. Both cases did well and were able to leave the hospital in six weeks.

Pharmacology and Therapeutics.

RECENT PAPERS.

90. Taylor, Dr. Fredk. — On Iodine as a Remedy for Vomiting. (*Lancet*, 1 Feb., 1890.)

91. Snowball, Mr., M.B.—On The Treatment of Diphtheria (*Australian Med. Jour.*, Dec. 1889, p. 494.)

92. Robin, M.—On The Physiological Action of Thalline (*Jour. of the Amer. Med. Assoc.*, Dec. 1889, p. 886.)

93. Peirce, Dr.—On The Treatment of Enteric Fever by Acetanilide (*Practitioner*, Jan. 1890, p. 14.)

94. Demme, Dr.—On the use of Strophanthus for Children (*Medicinish Chirurgisches Central Blatt*, No. 40.)

95. Formulæ for Cystitis. (*Gaz. de Gynicologie.*)

96. Dieulafoy, Dr. — On the Treatment of Asthma. (*Bull. Med.*, Jan. 22, 1890.)

97. Molèns, Dr. Paul de. — On the Treatment of Eczema of the Tongue. (*France Médicale*, Jan., 1890.)

98. Petit, Dr. W. — On the Exhibition of Bromide of Potassium (*Progrés. Med.*, Jan. 18, 1890.)

99. Meilach, Mdlle. Dr. — On the Sugars as Diuretics (*Bull. Gen. de Therap.*, Jan. 15, 1890.)

100. Marano, Dr. V. — On a Case of Goitre, Treated by Electricity (*Austral. Med. Gaz.*, Dec., 1889.)

101 Bark, Mr.—On the Antiseptic After-Treatment of Vaccination (*Brit. Med. Jour.*, Feb., 1890, p. 233.)

102. Browne, Mr. Lennox—On Menthol. (*Med. Press*, Jan. 1890, p. 34.)

103. Shtcherbakoft, Dr. Afanasy S.—On the Treatment of Metastatic Erysipelas. (*Novost's Terapii*, No. 2, 1890, p. 33.)

104. Gusakoff, Dr. Vladimer N.—Laurel-leaves in Treatment of Intermittent Fevers. (*Proceedings of the Caucasian Medical Society*, No. 12, 1889, p. 342.)

105. Wilcox, Dr. R. W.—On Cocillana. (*New York Med. Record*, Jan. 11, 1890.)

106. Corning, Dr. J. Leonard.—On the Efficacy of Wormwood (Artemisia Absinthium) in certain Conditions of the Cerebro-Spinal Axis. (*New York Med. Record*, Jan. 25, 1890.)

107. Cope, Dr. George P.—On Chloralamide as a Hypnotic for the Insane. (*Dublin Journ. of Med. Science*, Feb., 1890.)

108. Major, Dr. G. W.—On Peroxide of Hydrogen as a Solvent for the Membrane of Diphtheria. (*Montreal Medical Journal*, Jan., 1890.)

Art. 90. *Taylor on Iodine as a Remedy for Vomiting.*—The author confirms the good results attending the use of iodine in combating the obstinate vomiting of dyspepsia, nephritis, gastritis, &c., first brought forward by Dr. Gaunt, of New York. Dr. Taylor employs the compound tincture of iodine, in doses of from three to five minims, in from four to six drachms of water, to be repeated every half-hour or so. It does not always succeed, but he is inclined to consider that it constitutes a valuable addition to the means of treating cases of this kind, and it has appeared to him to have proved effectual much oftener than the drugs commonly resorted to for the purpose.

Alfred S. Gubb.

91. *Snowball on The Treatment of Diphtheria.*—The author states the plan of treatment he adopts in a case of diphtheria, where the larynx is not affected. Apply to the membrane a free cauterisation with strong nitric acid; afterwards mop out with a strong solution of zymine or lotion of liq. hydrarg. perchlor.; burn sulphur freely in the room, and if the patient will allow it, spray the affected parts with sulphurous acid solution (1 in 8); give stimulants internally, and large doses every hour of liq. hydrarg. perchlor., until salivation appears, guarding it with a heart tonic, such as digitalis or nux vomica. If the case is laryngeal, early tracheotomy should be insisted upon and the above treatment carefully carried out.

92. *Robin on the Physiological Action of Thalline.*—The following conclusions are drawn from an article published by M. Robin, in *The Bulletin Méd.* Thalline is a poison to the blood globules, the nervous system, and in general to tissues, rich in sulphur and phosphorous. Its antiseptic action within the organs of the body is insignificant and transitory. The following corollary is also drawn. Inasmuch as the antipyretic properties of thalline are united to its toxic effects upon the nervous system and upon the red globules of the blood, this remedy is a false and dangerous antipyretic which should be prescribed in the treatment of fevers. Its power of retarding the elimination of uric acid renders it unfit for use in the uricœuric affections, and consequently in the greater number of cases of anthritis and nephritis. Its prolonged employment tends to produce anœmia and to provoke in time more or less marked nervous disturbances. The study of the effects of thalline points to the entire contra-indication of the remedy.

93. *Peirce on the Treatment of Enteric Fever by Acetanilide.*—Dr. Peirce, of Sydney, contributes an article on the value of acetanilide in the treatment of enteric fever. The dose given was generally five to ten grains whenever the temperature reached 101° F., and to repeat the dose six or eight times in twenty-four hours if necessary. After each dose the temperature generally—after a slight oscillating peripheral rise—falls perceptibly in less than forty minutes, and attains its minimum in from two to four hours. The amount of reduction of the temperature depends on the duration of the illness, the severity of the attack, and the condition of the patient as regards age, complications, &c. The proportional reduction in children appears greater than in adults generally; and the effect is most obvious when the drug is given synchronously with the usual remissions of temperature. When the depressed temperature rises suddenly as the effect of the acetanilide is passing off, it should be checked boldly with another dose before typhoid stupour has time to supervene. By continuing this treatment throughout the disease, asthenic delirium is averted, assimilation and nutrition are improved, and organic degeneration, bed-sores, and exhausting suppuration are generally prevented; and by its action on the pulse and respiration the ultimate recovery of the patient is favourably influenced. It is also observable that pneumonia, as a complication of enteric fever, is prevented by early and continued acetanilide treatment. It is, however, a bad plan to keep the temperature too near normal by pushing the drug, as you must then resort to artificial stimulation and the application of external heat. The author does not claim for acetanilide that it cuts short the duration of enteric fever, but it acts much in the same way as throwing water on a structure which is being consumed by fire. During the course of the disease the drug produces intervals of ease and rest which enable the patient to withstand the further progress of the disease.

Richard Neale, M.D.

94. *Demme on the Use of Strophanthus in Children.*—The author says that strophanthus tincture may be used in treating children about 5 years old, it only exceptionally causing dyspeptic difficulties. The doses must be small on account of the danger of its possibly sudden paralysing effect on the muscle of the heart. The predominating effect of the drug is the increase of urine secretion, and consequently the decrease and cessation of dropsical symptoms. This result is in the first instance gained by the increase of blood pressure, as is apparent, for instance, in cases where there are valvular defects of the left ostium atrio-ventriculare. Here, however, strophanthus does not effect a compensation of the valvular defect as certainly as digitalis does. In diseases where there is already increased or even normal blood pressure, strophanthus fails to exercise a diuretic effect. A second and sometimes striking effect of strophanthus is, that it removes difficulty of breathing. This seems to point to an effect of this drug on the centres. It is observed in chronic nephritis as well as in such affections as asthma, bronchial and tussis convulsivæ. Probably, here too, the increase of blood pressure must be taken into account. With all the similarities between the effects of strophanthus and digitalis, it must be admitted that each drug has its own therapeutic importance. For the rapid compensation of valvular defects and prompt increase of blood pressure along with decrease of the pulse, frequency and increase of urine secretion, there is no doubt that digitalis is preferable. And if it fails, no better result can be expected from the use of strophanthus. On the other hand, if, for instance, valvular defects have been compensated by the use of digitalis, and the latter has, from long-continued use lost its effect, strophanthus may be tried with the best results to influence the action of the heart by increased blood pressure, to increase the diuresis and to remove difficulty of

breathing. In such cases, a combination of it, two drugs is advisable. Demme has never observed a cumulative effect of strophanthus, nor a loss of effect after long-continued use. JOHN ELLIOTT.

95. *Formulæ for Cystitis.*

℞ Borate of Sodium .... 1 part.
Syrup of raspberry .... 3 parts.
Infusion of lactucarium } of each 8 " —M.
Infusion of linden flowers }
One tablespoonful every two hours.
or
℞ Benzoic acid .... 1 to 2 parts.
Glycerin .... 5 parts.
Simple elixir ....75 " —M.
One tablespoonful every two hours.

96. *Dieulafoy on the Treatment of Asthma.*—At the beginning of the attack, paint the inside of the nostrils, as high up as possible, with a camel hair brush dipped in a solution, with 1 in 20 of hydrochlorate of cocaine in water. If preferred, the solution may be sprayed into the nose and throat for four or five minutes at a time. If this application does not cause the attack to abort, the patient should be made to inhale from 1 to 12 drops of pyroline, sprinkled on a handkerchief. When the attack is at its acme, inject hypodermically 10 grains of hydrochlorate of cocaine, to be repeated in a quarter of an hour if necessary. The remedy, *par excellence*, for asthma, is iodide of potassium, given in doses of 20 to 30 grains daily, but commencing with 5 grains only, gradually increasing. To combat the diathesis, we have three principal medicaments: — Iodide of potassium, belladonna and arsenic. The author recommends the following course of treatment:—The patient to take from 15 to 30 grains of iodide daily for fifteen days, then replace the iodide by pills containing ℞ powdered belladonna leaves and extract of belladonna, of each 4 grains, to be made into 20 pills. At the same time he is to take a teaspoonful daily of the following solution, after the principal meal:—℞ arseniate of soda 1 grain, distilled water, 2½ fluid ounces. If the patient be emphysematous, the use of baths of compressed air are also useful concurrently with the foregoing treatment.

Sporth on a Formula for Creolin Pills. — Sporth gives the following formula of the preparation of creolin pills:—℞ creolin, ʒijs; proof spirit, 16 drops; extract of liquorice and powdered liquorice, of each ʒijs, powdered trogacanth, 16 grains. To be made into 100 pills. He recommends these pills in all gastric conditions associated with abnormal fermentation

Hebling on Salolised Collodion.—Hebling suggests the following formula for the preparation of a "salolised" collodion, to be painted over painful rheumatic joints: —Dissolve 4 parts of salol in an equal weight of ether and add 30 parts of ordinary collodion.

97. *Molèns on the Treatment of Eczema of the Tongue.*—There are three principal indications for treatment, (1) Treatment of the diathesis, and especially of digestive derangements; (2) Scrupulous cleanliness of the buccal cavity; and (3) Treatment of the local lesions. The general treatment comprises the use of thermal waters with alkalies internally, to the exclusion of arsenicated preparations. Digestive troubles—nemasthenia and dilatation of the stomach must be carefully dealt with, and one of the best, though not the most pleasant, methods is irrigation of the stomach with a solution of naphthol, associated with the salicylate of bismuth. Constipation usually present must be combated *sec. art.* The mouth must be carefully overhauled, and if any decayed or damaged teeth be discovered, such as might give rise to irritation on the corresponding part of the tongue, these should be removed or filed smooth. The use of condiments and spices should be forbidden and the use of tobacco is absolutely inadmissible. The mouth should be washed out with emollient or alterative liquids at frequent intervals. Topical remedies are of undoubted utility, but require to be adjusted to the requirements of particular cases. Boracic acid, sulphur, and its principal compounds (especially the hyposulphate soda), lactic acid, solution of retorcine, all useful, and each very useful, be employed. If the tongue be very sensitive, solution of cocaine (1/40) or salicylic acid (1/25) are to be prepared. These last drugs must be used with caution in children on account of the readiness with which they are absorbed. ALFRED S. GUBB.

98. *Petit on the Exhibition of Bromide of Potassium.*—The great success of those who first used the bromides in the treatment of neurosis, and especially epilepsy, was largely due, according to Dr. Petit, to their method of giving the drug. The first point to bear in mind is to avoid too rapid an increase in the amount of the drug, as otherwise gastric troubles and intense prostration may result. Not more than twenty, or of thirty grains should be given daily to begin with, and every two or three weeks the amount may be augmented by ten grains, until as much as one and a half to two drachms have been reached. This, the maximum dose under ordinary circumstances, should not be attained in less than six months. The dose for males is somewhat higher than for females, sixty to seventy grains for the former corresponding to forty to sixty grains for the latter. The purity of the drug is a matter of considerable importance, and should be made the subject of special attention from time to time.

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99. *Meilach on the Sugars as Diuretics.*—From an exhaustive review of the researches and observations bearing on this subject, the author concludes that lactose and glucose are both powerful diuretics, this property being due to their effect on the kidney substance. When injected into the veins of animals, there is no elevation of blood pressure, and diuresis is produced without the passage of the sugar into the urine. As the sugars are consumed in the organism, they constitute a physiological remedy, serving the properties of an aliment at the same time. Moreover, unlike caffein, they do not act on the nervous system. The diuretic effect is in excess of the amount of liquids absorbed, and must be ascribed to a dehydration of the blood, which renders it peculiarly apt to re-absorb liquid effusions from the tissues. The diuresis is most marked in diseases of cardiac or cardio-vascular origin, when the urine is free from albumen. Even when albumen is present, the diuretic effect is still remarkable. This may even be obtained in patients whose urine contains such a quantity of albumen as to lead one to infer marked changes in the renal epithelium, but in this case the diuresis is less abundant and less lasting. Lactose only acts as glucose, hence the latter is the active agent. Lactose is given dissolved in *tisane*, in the proportion of 100 grammes to 2 litres; glucose in doses of 200 grammes of a syrup containing 75 per cent., 150 grammes of syrup of glucose will always bring about an abundant diuresis. The "grape cure" owes its efficacy largely to the action of the glucose contained in the grapes, and probably the diuretic action of milk is also due mainly

to the lactose. The author suggests that the "grape cure" might, in certain cases, be advantageously substituted for the milk diet, unless the existence of marked albuminuria points to the latter.

100. *Marino, on a Case of Goitre, Treated by Electricity.*—The author relates that the patient was a young lady, aged 23, apparently healthy. The goitre had existed for three years, and was of considerable size, extending to the anterior body of either sterno-martoid. The right lobe was the larger of the two. From the middle of the isthmus there was a pyramidal enlargement growing upwards in front of the larynx. There was no exophthalmos, but dysphagia, caused by spasm of the pharynx and the upper segment of the œsophagus. Internal remedies having failed, electricity was tried, by means of strong external faradic currents suddenly interrupted and electrolysis in alternate séances. The current for the latter was given by five to eight large Leclanché cells, and was applied by placing the positive pole—a sponge electrode—between the patient's hands, and by inserting in the tumour a small insulated glover's needle, with which was connected the negative pole. Only on two occasions were both poles applied with needles to the tumour. One or two electrolytic and one to three faradic séances were given per week, the former of four to six, and the latter of ten to fifteen minutes' duration. A marked improvement, especially in the subjective symptoms, took place from the first séance, while, after six séances, the goitre had diminished from one to two centimetres. The shrivelling, however, was not so rapid after the first three or four weeks' treatment. At the last séance it was seen that all the swelling had disappeared, and a short time later the patient was able to return to the country cured. [Dr. Stevenson makes some useful remarks upon this subject in his new book on "The Uses of Electrolysis in Surgery."—*Rep.*]

101. *Bark on the Antiseptic After-Treatment of Vaccination.*—Mr. Bark suggests an antiseptic pad, to be applied after the opening of the vesicle on the eighth day; as, in the author's experience, septic absorption does not take place before this date. The pad is composed either of boracic or eucalyptus absorbent cotton-wool, or of Hartmann's perchloride wood wool wadding, and covered at the back and edges by antiseptic gauze. This pad is not to be removed for at least six days, by which time a dry seat is formed without any sign of inflammation. The advantages claimed for this form of protector are:—It protects the arm from external violence; it absorbs all the discharge; it reduces the risk of septic absorption; it cannot be used a second time like ordinary shields; and, lastly, it is very cheap and easily applied.

102. *Lennox Browne on Menthol.* — Mr. Lennox Browne states the vapour of menthol checks, in a manner hardly less than marvellous, acute colds in the head, and is also to be recommended with a certainty of success, if used on its first onset, in arresting or as a preventive of infection in epidemic influenza, even when there are no nasal symptoms. Menthol stimulates to contraction the capillary blood vessels of the passages of the nose and throat, always dilates in the early stages of head cold and influenza. It arrests sneezing and rhinal flow. It relieves, and indeed dissipates pain and fulness of the head by its analgesic properties. It is powerfully germicide and antiseptic. The most convenient method of using the drug is by means of the ingenious pocket inhaler, known as Cushman's. This consists of a glass cylinder, four inches in length, half an inch in diameter, and open at both ends. The tube contains crystals of menthol closely packed and prevented from escape by perforated zinc and cork. One end is intended for inhalation by the mouth, and the other for the nostril; the latter is the method recommended by the author. It is not to be simply smelt, but well sniffed or inhaled, so as to cause some tingling or smarting, a sensation which is quickly followed by that of coolness, and openness of the previously stuffed and heated nostril. Menthol can also be employed as a vapour through a room or house; this can be done by placing a few grains in a saucer of water, which is placed over a gas-stove in the hall of the house. It can be used as a spray in the form of a 10 to 20 per cent. solution in almond oil. It has also been found to be of marked benefit in cases of sea sickness, and especially in the headache and vertigo which remain after vomiting and retching have passed off.

RICHARD NEALE, M.D.

103. *Shtcherbakoft on the Treatment of Metastatic Erysipelas.*—In the Moscow *Novosti Terapii*, No. 2, 1890, p. 33, Dr. Afanasy S. Shtcherbakoft, of Rostov-on-Don, highly eulogises the following simple treatment of migrant erysipelas. 1. The affected region should be painted with an ointment prepared of one part sulphate of iron (*ferrum sulphuricum Anhydratum*) and eight parts of white vaseline; and 2. The apparently sound adjacent zone should be covered with a layer of flexible collodion which is said to "strikingly arrest the spread of the morbid process."

104. *Gusakoff on Laurel-leaves in Malarial Fevers.* —Dr. Vladīmir N. Gusakok, of Novorossiīsk, emphatically draws attention to the laurel-leaves (*folia lauri*; Russ. *lavrovyi list*) as a very good and cheap remedy for intermittent fevers. They should be given best in the shape of *vodka* (aquavit) infusion prepared in the following manner. Finely cut or thoroughly crushed leaves are put into a bottle to fill about a third of the vessel. The latter is then filled up with *vodka*, well worked and left to stand in a sunny or warm place for four days, after which the infusion is filtered and administered, a small wineglass full (one ounce) once daily (before expected paroxysms, if given in febrile days). One, two, or three doses are said to be quite sufficient to cut short the affection. The simple remedy has been enjoying a high anti-malarial regulation in the South-Russian popular medicine from time immemorial.

VLADIMIR IDELSON, M.D.

105. *Wilcox on Cocillana in Bronchitis and Pulmonary Disease.*—In May last year Dr. Wilcox obtained a supply of concentrated tincture of cocillana, a drug obtained from the bark of an undetermined species of guarea, which was discovered in Bolivia, in 1886, by Professor Rusby, of the New York College of Pharmacy. The principal physiological action of the powdered bark he found was the production of nausea, as a desire to vomit, with metallic taste in the mouth within half-an-hour of its administration. The nausea was accompanied by an early discharge of mucous, succeeded by dryness of the throat. In short, its action may be described as a stimulation of the vessels and glands of the mucous surfaces, especially of the respiratory tract, for some hours, with subsequent diminution of activity (sedation). The dose of the concentrated tincture is from one-half to two fluid drachms every two to eight hours, and of the fluid extract from five to twenty-five minims. At the December meeting of the New York Academy of Medicine, Dr. Wilcox reported a number of cases in which he had used the drug, and from the

experience thus gained he was of opinion that it would be found most useful in subacute and chronic dry bronchitis. Its expectorant effect was more sure than either apomorphia or ipecacuanha in liquifying bronchial mucus, it increased the appetite, and acted, to some extent, as a laxative, probably by stimulating the intestinal muciparous glands. In chronic bronchitis, with viscid expectoration, it would render this sputum liquid somewhat more surely than ipecacuanha. On the other hand, in senile bronchitis, it might so markedly add to the bronchorrhœa as to become absolutely dangerous. When used in chronic pulmonary disease he had found cough and expectoration diminish, and night sweats and constipation relieved. He believed cocillana to be superior to apomorphia in acute bronchitis, and was certainly preferable to ipecacuanha, but it is not so useful as carbonate of ammonia in senile bronchitis. It is safer than pilocarpine in acute bronchitis, as it has no depressing action on the heart. The author concludes that cocillana might fully replace ipecacuanha, which is becoming dearer through diminished supplies.

106. *Corning on Wormwood (Artemisia Absinthium).*—As a medicinal agent wormwoood has gone very much out of fashion, although the drug possesses, when judiciously prescribed, many valuable properties. Dr. Corning points out that it has been employed in the treatment of epilepsy, chorea, and digestive disorders, while before the introduction of Cinchona bark it was used in intermittent fever; it was also recommended as an anthelmintic, a discutient, and an antiseptic. But, whatever may its value be in other conditions, the author is satisfied that it has a remarkably tonic influence upon the brain, and especially upon those higher mechanisms of the organ which are so intimately associated with psychical function. He is suprised, therefore, that it is not extensively employed in neurological medicine. In the treatment of those exhaustive conditions of the cerebro-spinal axis commonly known as "neurasthenia," he has found it a valuable remedy; valuable, because it dissipates in a few moments the hebetude, depression and indefinable sensations of malaise from which such patients periodically suffer. In depression, hypochondriasis and irritability, absinthe serves an excellent purpose, for, by a conservative exhibition of the drug, the distressing psychical features of the case may be modified or entirely obliterated, for a time at least. This may be done without inducing more than a slight feeling of exhilaration, in no sense comparable with intoxication. This power of promptly relieving the most exigent symptoms, those of a mental character, the author regards as of vast importance, since it enables the physician to render the condition of the patient comparatively comfortable, while remedies. potent, though lethargic in their action, may be employed for the permanent eradication of the disease.

George Brown.

107. *Cope on Chloralamide as a Hypnotic for the Insane.*—The author quotes a large number of cases in which he has tried chloralamide, and he concludes that chloralamide is undoubtedly a sleep-producing agent; that the sleep created varies from five to eight hours, and appears to be sound and refreshing. A dose of 25 to 35 grains was sufficient to cause sleep in patients suffering from melancholia and chronic mania, but in cases of acute mania small doses had no effect, and sleep was not produced by less than from 40 to 50 grains. No recognised evil effects followed the continued use of this drug for eight days; only one out of twenty-five persons under treatment with chloralamide was noticed to be suffering from gastric disturbances—viz., giddiness and sickness, with dry brown tongue, which followed six hours after a draught when no sleep ensued. In comparison with other hypnotics, chloralamide, as it consists of a combination of chloral, somewhat resembles it in its action. Both induce sleep, lasting from five to eight hours, but they appear to possess little analgesic influence unless when they cause sleep. Unlike opium, they will not relieve pain. The time that elapses before sleep is produced varies from thirty minutes to one hour, and the sleep appears to be natural and refreshing, Its action on the circulation is stated to be quite the opposite of that of chloral hydrate, which acts directly upon the blood pressure, slowing the pulse and respiration, and producing poisonous effects, by direct action on the cardiac ganglia and respiratory centre, causing paralysis of the heart and cessation of respiration. Chloralamide appears, as far as he has been able to ascertain, to be free from such danger. In five cases—one of pneumonia, one of phthsis, one of cardiac disease, and two of insomnia—he obtained sphygmographic tracings before and after its administration, and the blood pressure was not lowered in any of them, while the respiration and temperature remained the same. Dr. Daniel Leech (*British Medical Journal*, November 2nd, 1889), writing about chloralamide, states that "it seems probable that the formamide element, containing as it does a substitute NH_3 group, will stimulate the circulatory and respiratory centres in the medulla, thus tending to counteract the depressing influence of chloral on them." Reichmann noticed that with doses ranging from 30 to 60 grains the blood pressure was not lowered. Comparing chloralamide with sulphonal, which has been extensively used in the Richmond District Lunatic Asylum, with very satisfactory results, for the last year and a half, he said he had practically nothing to add to the observations made by Dr. Conolly Norman (*Dublin Journal of Medical Science*, January, 1889), and fully confirmed by further experience. Speaking of sulphonal, Dr. Norman states that "its disadvantages are (1) that it is bulky and practically insoluble, therefore difficult to administer, and that, perhaps, owing to its insolubility; (2) it is slow in action." Chloralamide, on the contrary, is not bulky, is tolerably soluble, quick in action (thirty minutes to one hour), and is now cheaper than sulphonal has even yet become. On the whole, he believes that this new hypnotic is well worthy of a trial, having proved for so far safe and reliable.

Alfred S. Gubb.

108. *Major on Peroxide of Hydrogren in Diphtheria.*—The use of peroxide of hydrogen (hydroxyl) as a solvent for the membrane of diphtheria was, the author believes, introduced by Dr, Love. of St. Louis, who employed it in a solution containing from 0·5 to 3 per cent. Dr. Major has, during the past two years, used hydroxyl in aqueous solution (formula H_2O_2) in twenty-two cases of diphtheria of more than average severity, and with decided septic tendency. He found it to possess the following advantages:—(1). It offends neither the sense of taste nor smell—being tasteless and odourless. (2). When applied locally it causes no irritation and occasions no pain. (3). When swallowed it is harmless, as it is not poisonous. (4). It is a powerful antiseptic and deodorizer. (5). It in no way precludes the simultaneous use of any other local remedy. (6). It is a perfect solvent for the exudation of diphtheria. As a local application the author usually commences with a 60 per cent. solution, increasing to the full strength

of the so-called "ten-volume" peroxide of hydrogen. When so used the membrane seems to corrode and come away in fragments of a more or less porous character. The author has seen the solution remove membrane as quickly as it could form. In nasal cases it keeps the nose free from membrane, and gives the bichloride or other solution a chance to act. In the most offensive cases it deprives the discharges of their unpleasant odour. In the larynx it occasions a little alarm by the escape of gas as it comes into contact with the membrane, but it does not in any way interfere with respiration. GEORGE BROWN.

Medicine.

RECENT PAPERS.

109. VILTCHÜR, Dr. A. C. J.—On the Influence of Influenza on the Course of Pulmonary Phthisis. (*Vratch*, No. 2, 1890, p. 23).

110. SPILMAN and PARISOT.—On Furunculosis and Polyuria. (*Annales de Derm. et de Syph.*, vol. x., No. 8.)

111. CHARRIN and ROGER, M.M. — On the Influence of Fatigue on the Development of Infectious Disease. (*Revue Scientifique*, Feb. 1, 1890.)

112. HEHIR, Dr. P.—On The Ætiology of Cholera (*Ind. Med. Gaz.*, Dec. 1889.)

113. WOODBURY, Dr. FRANK.—On a Formula for Acute Cystitis. (*Journ. of Amer. Med. Assoc.*, Jan. 25, 1890.)

114. KNOTT, Dr.—On a Case of Malignant or Pernicious Anæmia. (*Brit. Med. Jour.*, Feb., 1890, p. 332.)

115. WETHERED, Dr.— On Primary Carcinoma of the Pancreas. (*Lancet*, Feb., 8, 1890.)

116. UNNA, Prof.—On a Case of Tuberculosis conveyed by Earrings. (*Wiener Med. Blat.*, Jan, 1890.)

117. TROYE, Dr.—On Diabetes Mellitus. (*Archiv. für exper. Path. u. Pharm.*, 1890. Bd. 26. H. 5. 6.)

ART. 109. *Viltchür on Influenza and Phthisis.*—Dr. Viltchür, house physician to the Obukhovsky Hospital, in St. Petersburg, details his observations on the influence produced by influenza on the course of pulmonary tuberculosis. The observations were made during the last epidemic of influenza which was raging in the Russian northern capital in October and November, 1889. Having under his care extensive phthisical wards of the hospital, the author was enabled to register the following interesting facts. 1. About 50 per cent. of phthisical patients admitted at the time to the hospital were suffering from unmistakable influenza (only such cases are here taken in account as were characterized by chorea, muscular pain and headache; in reality, the complication was present by far more frequently, since, in a large proportion of cases of genuine influenza, the said characteristic group of symptoms may be absent altogether; meanwhile they were left by the author out of consideration). 2. The number of phthisical cases admitted were markedly increased during the epidemic (the absolute number was twice as large as in the preceding years, the percentage being 16·90 against 12·96 in 1888). 3. The mortality (both absolute and relative) considerably rose. 4. The duration of the period elapsing between the patient's admission and his death was at least thrice as short as in preceding years (10·5 days against 38·5). The general corollary drawn by Dr. Viltchür from the facts is, naturally, to the effect that influenza represents an exceedingly grave complication of pulmonary phthisis. The author dwells, further, on the classical features of phthisis, complicated by grippe. They are said to be very characteristic and widely different, from those of an ordinary (incomplicated) phthisis. On admission, the patients (belonging mostly to working classes) were found to differ from typical phthisical cases seeking a hospital treatment in non-influenza times, in their being generally nourished comparatively better and, at the same time, in their having striking cyanosis of the face and limbs, severe dyspnæa, exceedingly grave prostration, high fever (40·5° or 41°C), and most abundant *râles* with "whistling" murmurs, the sputa being almost invariably blood-stained and hæmoptysis quite unusually frequent. The most characteristic feature, however, was constituted by a strikingly rapid course of pulmonary process, subsequently to their admission. "The diseased area of the lung," the author says, "was distinctly increasing, literally from day to day, the patients melting away in our sight." Some of them died from such rapid and enormous spread of the tubercular process, some from profound prostration, the latter cases often ending in death quite suddenly. In three cases referring to previously non-phthisical and generally robust men, an attack of influenza was followed by galloping phthisis (*phthisis florida*), the patients dying in about four weeks. The latter cases, as well as the fact that pulmonary tuberculosis, when complicated by influenza, assumes a fulminant course, Dr. Viltchür explains by the hypothesis that the morbid agent of influenza is endowed with a peculiar power of lowering the vitality of the patient's system in general, of the pulmonary tissue in particular, and hence decreases his capacity of resistance towards the tubercle-microbe.

110. *Spilman and Parisot on Furunculosis and Polyuria.*—The authors conclude that:—1. Furunculosis, associated with polyuria, does not always constitute a certain indication of glycosuric diabetes or even introgenous diabetes. 2. Furunculosis may accompany either simple or symptomatic polyuria. 3. Furunculosis developed in the course of diabetes, is encouraged by the drain of fluid from the tissues, and more especially by the impaired nutrition of the skin.

111. *Charrin and Roger on the Influence of Fatigue on the Development of Infectious Disease.*—The authors have attempted to afford experimental confirmation of the generally received view that physical fatigue is a powerful factor in the production of infectious disease. They subjected a number of white rats to severe exercise (running in a rotating cage) for four consecutive days, at seven hours each. Eight of these tired out animals were then inoculated with attenuated anthrax virus, four animals in a normal condition of health being inoculated with the same virus at the same time, in order to serve as a standard of comparison. The result was, that seven of the eight animals belonging to the first series succumbed, while all the animals of the second series survived. They explain in this way the curious tendency of epidemics to break out among soldiers during the *grands manœuvres* and on campaign, and they urge that many a soldier is rendered susceptible to the disease by fatigue, who would otherwise have escaped.

ALFRED S. GUBB.

112 *Hehir, on the Ætiology of Cholera.* — The author, at the conclusion of a paper upon this subject, sums up as follows:—The possible infectious nature of cholera in households is explicable on the following considerations. (*a*) The poison is contained in the

ejecta. (*b*) The poison is a particular organic body (possibly a micro-organism), capable, under favourable circumstances, of rapid multiplication. (*c*) The dried and pulverulent form of the dejecta is not appreciable to the senses, and therefore all the more dangerous. (*d*) After the evaporation of the liquid portion of the dejecta, the desiccated poison diffuses in the air, finds entrance through the mouth, loiters at the back of the throat, and is swallowed with the saliva or washed down with any fluid taken. Once it reaches the alimentary tract, in susceptible persons, the cholera poison begins its ravages. Some observations made during epidemics have led me to infer that poison of cholera remains *latent* in a locality, ready to reappear when the conditions favourable to its propagation come once more into operation. This was demonstrated in many instances, in which the disease recurred in the same house in two, and in a few instances in three, successive years.

113. *Woodbury on a Formula of Acute Cystitis.*—Dr. Woodbury claims that acute inflammation of the bladder is immediately relieved by the following mixture taken every two hours: Infusion of uva ursi, ʒiv; bicarbonate of soda. gr. x.

114. *Knott on a Case of Malignant or Pernicious Anæmia.*—Fleet Surg. Knott publishes the following interesting case:—An able seaman, aged 24, of fair general physique, came on the sick list, Feb. 16, complaining of ill-defined pains about his chest, loins, etc. He said he had been in failing health for three or four weeks; he had lost flesh, and was easily fatigued. After careful examination nothing definite could be detected, but, as he was looking so ill, he was placed in bed to be watched, The tongue was clean, appetite fair, temperature normal, and all the bodily functions appeared to be regularly performed. Three or four days after admission he began to lose appetite, and vomit after food; he complained of much lumbar pain, and when he coughed or drew a long breath the pains in his chest and back were much increased. At the end of a week he began to vomit almost incessantly; at first the vomited matters were yellow, but soon became green. He was rapidly losing flesh, the bowels became very confined, the tongue thickly coated, but there was no rise in temperature, and no local tenderness in any of the bones. At the end of 10 days he was sent on shore to the hospital, and he rapidly became weaker; there was much tenderness about the chest walls, and he had several attacks of epistaxis; he looked like a man suffering from pernicious anæmia. He gradually sank and died on April 2. On *post-mortem* examination a hard thickened patch was found in the stomach, near the pylorus, and the glands in the lesser curvature were of quite cartilaginous hardness, varying in size from a pea to a horse-bean. On opening the stomach the hard patch was found to be the cicatrix of an old ulcer. On examining the chest the ribs looked healthy, but on dividing them many were found to be quite soft; the cancellous structure had broken down, and was replaced by a pink creamy matter; the sternum was in the same condition, as were also the clavicles and femora. The case was evidently one of general osteomyelitis, and that this was the cause of the anæmia was never suspected until the *post-mortem* examination revealed the state of the bones.

Richard Neale, M.D.

115. *Wethered on a Case of Primary Carcinoma of the Pancreas.*—The patient was a warehouseman, aged 54. He had been wasting for eighteen months, suffering also from constant pain in the epigastrium, which was increased after food and relieved by vomiting. The vomit consisted of food matter only until ten days before death, when it was black, and described by the patient as small in amount, and like coffee. On examination of the abdomen there was deep-seated tenderness in the epigastrium, but no tumour could be felt. At the *post-mortem*, a tumour, about the size of a tennis ball, was found occupying the head and part of the body of the pancreas. The tumour was only adherent to the posterior wall of the stomach. In the interior of the stomach at this part was an oblong ulcer, about three inches long and one wide, the edges of which were only slightly thickened, and the floor formed by thickened connective tissue. Microscopical examination showed the tumour to be an encephaloid cancer. All the other organs were healthy; the bile duct was patent, and there were no secondary deposits. The main diagnostic points in favour of disease of the pancreas were:—Continuous wasting, deep-seated pain, and absence of hamatemesis. Usually, also, jaundice occurs, and secondary deposits in the liver are commonly present. But in the case above quoted each of these signs was absent. Encephaloid disease of the pancreas was extremely rarely met with.

116. *Unna on a Case of Tuberculosis Conveyed by Earrings.*—A girl, ætat 14, of a healthy family, who became infected with tuberculosis by wearing earrings which had previously been worn by a woman who died of pulmonary consumption. Flat ulcers with undermined borders developed in the lobes of the ears, especially on the left side. There was also swelling and induration of the cervical glands on the left side, and dulness over the apex of the left lung. Tubercule bacilli were found in the granulations of the ulcers and in the sputum. Acute phthisis supervened, to which the patient succumbed.

117. *Troye on Diabetes Mellitus.*—This paper contains the results of investigations begun two years ago, in Prof. Naunyn's words in Königsberg, to ascertain the effect of a successively increased supply of sugar upon the sugar-excretion in diabetes. The question for answer was whether increase of sugar in the food up to a certain amount would be followed by excretion of sugar beyond that amount. If this were the case, then it would follow that the excretion of sugar in itself was an evil, lessening more and more the capability of the organism to assimilate sugar. Precautions were taken as regards the diet, two of the four patients being placed under lock and key, and the others carefully supervised. The sugar in the urine was estimated by the use of a Soleil-Ventzke polarizing apparatus. Occasionally, Fehling's solution was used for the sake of comparison, but the difference in result was very slight, viz., 0·1 to 0·3 in favour of the latter. Elaborate tables are given concerning the food supplied and the urinary constituents, and the author draws the following conclusions:—The above question receives a negative answer in all four cases. There are apparent exceptions for a few days, but when averages extending over longer periods of time are taken, the result is as stated. But it was also found clearly that the assimilative power of the system in diabetes is really lowered by a persistent supply of dextrose, though not to the extent that had been supposed. This lowering, moreover, may be accompanied by a visible improvement in the bodily condition. In two of the cases there was an increase of the excreted sugar, when the amount of animal food supplied reached a certain degree. In one case, glycosuria followed an exclusive flesh diet, when the

amount given was large. The author remarks, as regards an exclusive flesh diet, that except in a few cases with nervous symptoms, loss of weight (and increase of ferric chloride reaction), this diet is mostly endured quite well, and without any essential difficulties patients may be kept on it for months together. E. J. Edwardes, M.D.

Pathology.

RECENT PAPERS.

118. Klippel, Dr. — Des Lésions Histologiques dans La Paralysie Générale des Aliénés. (*Bull. de la Soc. Anat. de Paris*, ser. 5, tom. iii., p. 635.)

119. Thorburn, M. W. — On Diseases of the Breast in the Male. (*Brit. Med. Jour.*, Feb. 1, 1890).

120. Tizzoni, Prof. — Sugli Effetti dell' Asportazione delle Capsule Surrenali nel cane. (*Mem. della R. Acc. dell Scienze Bologna.*, ser. iv., tom. ix., p. 27.)

121. Rosenthal, Dr. O.—On a Case of Pseudo-Hermaphrodism. (*Med. Press*, Jan. 12, 1890.)

122. Horner, Dr. Otto.—On a Case of Cerebral Complications of Ear Disease (*Albany Med. Alm.*, Jan. 1890.)

123. Trousseau, M. A.—On Inoculation of Conjunctival Lupus in the Eyes of Rabbits. (*Annales de Derm. et de Syph.*, vol. ix., No. 8.)

124. Chaput, M.—Two Cases of Placental Retention: Histological Examination. (*Bullet. de la Soc Anat. de Paris*, Jan. 1890.)

125. Roesger, Paul. — On the Structure and Origin of Myoma Uteri. (*Zeitschr. J. Geburtsh. and Gynäk.*, vol. xviii., No. 1, 1890.)

Art. 118. *Klippel on General Paralysis.* — The observations which form the subject of this paper are based on the study of seven cases of the disease. *Cortical Lesions.* (1) The portion of the cortex adherent to the meninges shows a more or less intense inflammation, with thrombic obliteration of the vessels. (2) In that part which borders on the erosion, the vessels are exsanguine and uninflamed. Fatty degeneration has never been found in this region. (3) In the part subjacent to the erosion peri-vascular inflammation is found. (4) At the level of the erosion are found (*a*) in the nerve cells degenerative alterations leading to a more or less complete disappearance. There is also an increase in number of the small round cells lying near the ganglion cell. (*b*) The nerve fibres, as shown by a new method of examination, have often completely disappeared; a collection of granules appearing to correspond to them. (*c*) The neuroglia increases in amount as the nervous elements degenerate. The author remarks that the disease appears to be rather a parenchymatous inflammation than an interstitial encephalitis. (*d*) Vascular lesions. In some parts intense hyperæmia is observed, in others, ischæmia from thrombosis. *Lesions of white substance.* The cells of the neuroglia are more dense and voluminous than in the normal condition, and are infiltrated with granules. The degeneration of the nerve fibres is similar to that in the cortex, whilst the vessels are generally less affected. *Lesions of spinal cord, nerves and muscles.* In the cord and medulla degenerative lesions, quite similar to those of the brain, exist in the condition of a diffused lesion. The ganglion cells of the medulla and anterior cornua are either destroyed or in process of degeneration. The nerves and muscles present atrophic condition in a very marked degree. *Lesions of other organs.* The kidneys are always greatly altered, being sometimes in a condition of interstitial nephritis, sometimes in one of fatty degeneration. Where there was no particular marked eye-lesion, the microscope showed degenerative changes in the epithelium. The heart was always yellow and flabby.

119. *Thorburn on Diseases of the Breast in the Male.* —At a meeting of the Pathological Society, of Manchester, the author showed two specimens, illustrative of disease of the breast in the male. The first was a tumour which he had removed from the right breast of a boy aged 11. The growth had been noticed 12 months previously,and was then the size of a hazel nut, but when first seen it was as large as a small orange, and of the shape and consistency of the ordinary female breast. Some pain was felt in the region of the growth and down the arm. No fluid could be pressed out of the nipple. No cause could be found except that the boy leaned against the breast when writing. There were no signs of inflammation; the testes and penis were normal, and the face by no means effeminate. On removal the mass was found to consist of fibrous tissue with a few ducts lined by columnar epithelium, and almost devoid of lumen. The second case was a scirrhus of typical structure, removed in 1886, by Mr. F. A. Heath, from the left breast of a man aged 55. The growth, which was about double the size of a walnut, had been noticed for twelve months, and the ancillary glands were not supposed to be affected. No cause could be assigned for its appearance. H. Percy Dunn.

120. *Tizzoni on Removal of the Supra-Renal Capsule.*—(1) Removal of the supra-renal capsule in the dog, as in the rabbit, causes the death of the animal with similar morbid conditions, and similar anatomical alterations of the nervous system. (2) These anatomical changes throw a light on the connections between the supra-renal capsules, or the adjacent sympathetic system and determined points of the spinal cord (posterior columns and especially those of Goll, periependymal zone and commissural system in general). (3) These effects follow when a single capsule is removed. (4) The functional alterations and the death of the animal take place many months after the operation. on which account the hypotheses of the direct influence of traumatism, or of an accidental morbid process of infective nature, may be excluded.

121. *Rosenthal on a Case of Pseudo-Hermaphrodism.* —The individual, æt. 23, was considered at birth to be a female, and was brought up as one. He was sent to a higher girls' school, and was dismissed, for improper behaviour. He was then sent to a communal girls' school. In his twelfth year an examination was made at his own request by the police surgeon, when he was recognised as a boy, and put to locksmith's work. Sexual inclination began in him very early, and in his 13th year he had erections, and in his 14th emissions of semen. His voice was manly, he had a small moustache, and a disposition to a beard and whiskers; on the other hand, his features were delicate and feminine. The first thing noticeable on the genitals was that the hair, as in a woman, ran down the mons veneris in two lines towards the perinæum. From this two folds project a larger on the right and a smaller on the left that might be taken for labia majora if the evident corrugations of the divided scrotum did not lead to a recognition of the true condition. In the right scrotal half was a hernia, the left was empty. No testicle could be found, there was therefore double cryptorchismus. In the midst

between the two scrotal halves, corresponding to a clitoris, was a small, moderately-developed penis, the corpora cavernosa normal, no prepuce. The glans was imperforate; on its under surface was a furrow that extended to the perinæum, and there fixed the penis; it ended by a funnel-shaped opening into the urogenital canal or urethra. The patient held his urine a long time that he might open it forcibly, but even then he could not prevent himself wetting his thighs and seat. Cohabitation was completed in a sitting posture, and there could be no such thing as an immissio penis. The author proposed "redressment" of the penis, and the formation of a new urethra.

122. *Horner on a Case of Cerebral Complications of Ear Disease.*—Dr. Otto Horner, of Frankfort, points out that all the cerebral complications of ear disease are more frequent on the right than on the left side. Thus, of 31 cases of cerebral abscess, 18 occurred on the right side from disease of the right ear, and 12 on the left, from disease of the left ear, and in one there was an abscess on both sides, following disease of both ears. Similarly, of 61 cases of thrombosis of the lateral sinus, 35 were met with on the right side, and 26 on the left. Of 23 cases of meningitis from ear disease, 17 affected the right side, and 3 the left. Adding these together, we have a total of 115 cases, of which 70 were on the right side, 44 on the left side, and one bilateral. Horner traces the greater frequency on the right side to the fact that the groove for the lateral sinus passes further, forwards and outwards, into the petrens and mastoid bones on the right side than on the left. The bony walls separating the sinus from the mastoid autrum is therefore thinner on the right side. Added to this is the fact that in vrachycephalic skulls the anterior cerebral forsa is considerably nearer the mastoid autrum than in the dolichocephalic. In the former, cerebral complications of ear disease more readily ensue than in the latter.

123. *Trousseau on Inoculation of Conjunctival Lupus in the Eyes of Rabbits.*—M. A. Trousseau presented at the weekly meeting of Physicians of the Hospital, St. Louis, April 11th, 1889, two rabbits, in the eyes of which he had successfully inoculated lupus taken from the conjunctiva of a young woman. The two inoculations were made on February 21st, 1889. Before the portions of lupus to be utilized were detached, the conjunctiva of the patient was washed with boiled water, in order to free the membrane from secretions. Having made an aseptic puncture in the eye of the first rabbit, M. Trousseau introduced into the anterior chamber, without wounding the iris, a portion of lupus twice as large as the head of a pin. This he deposited with a silver spatula in the centre of the pupil. No dressing was made, the nature of the incision permitting of complete closure of the wound. Rupture of the iris was prevented by the instillation of eserine. There was no inflammatory reaction, and a week after the operation the nodule was completely absorbed. Nothing could be noticed in the anterior chamber for ten or twelve days. On the twelfth day a certain amount of swelling and a peculiar fold in the iris became noticeable. There then appeared on the surface small white points, which increased in number and size, and presented the aspect of true nodules. The anterior chamber is now filled with yellowish nodules, some of which are small, others as large as a pea, and which seem to adhere to the hyperæmic iris. The rabbit was very robust, and its general health has not suffered. In rabbit No. 2, the inoculation was made into the cornea. Without opening the anterior chamber, a minute portion of conjunctival lupus was introduced into the thickness of the membrane without the least reaction taking place. It was absorbed on the eighth to the tenth day. A fortnight afterwards there appeared in the cornea a greyish point, which increased in size, and finally formed a yellowish, somewhat large tumour, which now raises the inner laminæ of the cornea, and is isolated from the anterior chamber. The general condition of the rabbit is very satisfactory. The author calls attention to the complete absorption of the lupus products, and to the appearance of new tumours in parts which had seemed to be restored to their original integrity.

124. *Chaput on Vitality of the Placenta after Abortion or Death of the Fœtus.*—Two cases are described where the placenta lived under these conditions. A woman, aged 36, aborted at the second month of her ninth pregnancy. Constant hæmorrhages, with other symptoms of retained placenta, followed. Two months after the abortion the placenta, which had been detected by digital exploration, was removed by means of a sharp curette and preserved for examination. In the second case, the patient was 40 years old. In her eighth pregnancy she had symptoms of threatened abortion at the third month. The fœtus and placenta were retained for two months, and then removed by M. Chaput. The patient died thirteen days later. The placentæ from these cases were carefully examined. They were almost identical in appearance, even under the microscope. The tissue was firm and sclerosed, and in parts infiltrated with blood. The villi, diminished considerably in number, were from twice to ten times their normal size. They bore flattened epithelium, no vessels, and the largest contained groups of giant cells resembling decidual cells. These structures were very granular, and without distinct nuclei; they were hardly stained by picrocarmine. The cells in the smaller and less hypertrophied villi were flattened, elongated, angular, and without nuclei. They were hardly affected by staining. They resembled the atrophied cells of loose cartilages from joints. The deeper part of the placenta consisted of connective tissue, also hard to stain. Thus the placenta does not necessarily die after death of the fœtus in the uterus, or after abortion where it is not expelled; on the other hand, though it lives, it remains a source of danger. [For instructive observations on a kindred subject—the growth of the placenta after death of the fœtus in extra-uterine pregnancy, *See* discussion on papers on Extra-uterine Fœtation, *Trans. Obst. Soc.*, vol. xxix., 1887. —*Rep.*]

125. *Roesger on Pathogenesis of Uterine Fibroids.*—The object of the author is to maintain a theory that these tumours are practically identical with embryonic uterine tissue. He appears to agree with Kleinwächter that this tissue is, normally and abnormally, developed from the muscular coats of its arteries. In the early fœtus the uterine walls exhibit no trace of laminae, so conspicuous in the adult. The whole organ is made up of a uniform mass of plain muscle cells, embryonic in type, that is, not so long as in the fully-developed organ, more flattened and fusiform and with less distinctly staff-shaped nuclei. The smaller arteries, even up to the seventh month, appear as though they had lost their adventitia, precisely as in young myomata. Large tubules of epithelium run amongst the bundles of muscle-cells. At the ninth month indications of lamination of the muscular tissue can be detected and arterioles with complete coats, as though permanent and simply nutritive in function, exist in considerable

quantities. The endothelial tubes still abound. The uterine tissue still resembles the substance of a myoma. At birth the lamination of the uterus, now consisting of outer and inner muscular, and the middle or vascular and muscular, coats, is distinct, and arterioles with perfect coats abound. [Should Dr. Roesger's theory be true, myoma uteri consists of embryonic tissue. We can, therefore, understand how a myoma may sometimes become malignant like a sarcoma, as has repeatedly been noticed. Indeed, under this theory, it is singular that malignant changes are so rare in so common a disease as uterine "fibroid."—*Rep.*]

ALBAN DORAN.

Diseases of the Nervous System.

RECENT PAPERS.

126. **PETERSON, F., M.D.**—On the Colonization of Epileptics (Bielefield). (*The Journal of Nervous and Mental Diseases*, N. Y., Dec, 1889).

127. **CHASLIN, Dr.**—Note sur l'Anatomie Pathologique de l'Epilepsie dite Essentielle. (*Annales Medico-Psychologiques*, Jan., 1890).

128. **CHRISTIAN, Dr.** — Des Injections Sous Cutanées d'Ergotinine dans le Traitement des Attaques Epileptiformes et Apoplectiformes de la Paralysie Générale et des Affections Choniques du Cerveau. (*Annales Med.-Psychol* No 1, 1890).

129. **FALRET, Dr.**—De la Mélancholie et de ses Diverses Variétès. (*Annales Médico-Psychologiques*, No. 1, Jan., 1890).

130. **CROSSFIELD, Dr. F. S.**—On Epilepsy Caused by Intra-Nasal Disease. (*Journ. of the Amer. Med. Asso.*, Jan. 25, 1890.)

ART. 126. *Peterson on the Bielefield Colony of Epileptics.*—Twenty-four years ago, a Lutheran clergyman, Pastor von Bodelschwingh, purchased a farm as a refuge for epileptics, starting with four. More houses were added gradually, and the growth of the colony of epileptics is enormous. In 1878 there were 250 such; 1880, 458; in 1882, 556; in 1886, 530; and the number is now over 1,000. Over 2,400 epileptics have been received in twenty years; of these 156, or over 6 per cent., have been discharged as cured, and 450 as improved. The industrial pursuits are many and varied. There are now 55 houses, 150 families, and over 2,000 inhabitants of the colony in all. The colony resembles a country village, with variegated cottages and pretty gardens, the whole being scattered over 520 acres of woodland and meadow. As amongst the epileptics men of every trade are found, the houses have been built and furnished at very slight expense. The mode of administering potassium bromide may be of interest to readers:—20 grammes in 200 aquæ puræ (ʒv in ℥vj). Take one tablespoonful thrice daily after meals for the first week. If the seizures become less frequent, keep to the same dose; if not, increase to four tablespoonfuls daily in the second week, to five in the third week, and so on, the maximum being eight tablespoonfuls daily. If this large dose prove injurious mentally, or cause severe eruptions, especially in the legs, gradually diminish the dose. In many cases only minimal doses are tolerated; these should then be persisted with indefinitely. The above dosage is for persons over sixteen years old. From the age of ten to sixteen, begin with three tablespoonfuls, increasing, if necessary, to five or six. Under ten years, begin with two doses and increase to four. Very young children have proportionately less. Large quantities of the bromide are used, as it is also sent out with or without remuneration, to epileptics all over the world. About 800lbs. a month are used, and great care is taken to have the drug as pure as possible. As commonly sold, it is apt to contain chlorate of potash, even to the extent of six per cent. After the cessation of attacks, the drug should still be taken, in gradually decreasing doses, for eight or nine months.

127. *Chaslin on the Pathological Anatomy of so-called Essential Epilepsy.* — The pathological anatomy of epilepsy is still very obscure. Among the cerebral alterations which seem to have been observed most frequently are those seated in the cornua ammonis. Bouchet and Cazanvielh mentioned them in the year 1825. Since then observations have accumulated in France and other countries. Coulbault gathered them together in his thesis:—"Des lesions de la corne d'Ammon dans l'Epilepsie" (Paris 1881). The usual lesion found was scleral induration of tissue, and three microscopical examinations showed the process to be a connective hyperplasia, leading to granular fatty degeneration of the vessels and pyramidal cells. Dr. Chaslin, medecin suppléant of the Bicêtre hospital, has lately taken up this subject, and the following conclusions are based on the microscopical examination by him of the brains of five epileptics in the "service" of M. Féré:—"(1) Certain lesions, described under the term cerebral sclerosis, appear to be due (at least some forms of them) to a proliferation of the sustaining tissue, especially the fibrils of the neuroglia. I propose to use here the term neuroglial sclerosis, or gliosis. (2) Induration of some part of the encephalon, especially of the cornua ammonis or the olivary bodies, has long been remarked in epilepsy. This induration is the outward sign of the proliferation concealed in the neuroglia. When there is no microscopic lesion, we find everywhere the same fundamental process, viz., a neuroglial sclerosis. It appears to me that this excess of production of sustaining tissue ought to be ascribed to a lesion of development or evolution, on account of the important rôle played by heredity in epilepsy, and on account of the absence, in many cases, of any clear signs of inflammation. In most of the cases where there is an apparent lesion, it is still the neuroglial proliferation which caused the epilepsy."

128. *Christian on Ergotinine Injections in Epileptiform and Apoplectiform Attacks of General Paralysis and Chronic Cerebral Affections.*—There is no appreciable difference in symptoms between the above forms and the epileptic attack (*morbus sacer*). They come on suddenly, without prodromata, and they are rarely isolated, but several successive attacks may occur without interruption. The prognosis is always grave, and if the temperature rises death is certain. They usually occur towards the end of life in general paralysis, but may take place in the early stage. The usual treatment has been repulsive and lowering; leeches behind the ears, phlebotomy, ice to the head, blisters to the nape of the neck, etc. Discordant as are the results of *post-mortem* examinations, it is evident that, in these attacks, the cerebral circulation must be profoundly deranged, and therefore ergot was tried in the form of subcutaneous injections of Tanret's solution:—Ergotinine 0·01, lactic acid 0·02, cherry laurel water 10 centigrammes, *i.e.*, one milligramme of ergotinine per cubic centimetre. Thirteen cases were treated in this way; in seven the

symptoms disappeared after one or more injections. Six patients ultimately died, three of them from other causes after decided improvement, a fourth showed at the autopsy hemorrhage into the pia mater. On the whole, ten had the attacks stopped, and their existence prolonged by these injections. Tanret's ergotinine (1875) is very much more active than ergot (*mille fois plus active*). No local bad effects were produced. It stopped the fits very soon, and after two or three hours the pulse was slowed and the temperature lowered. Tried on a true epileptic, two injections daily for a week, the effect was absolutely *nil*. Given against epileptiform attacks in general paralysis, the drug evidently combats a factor that does not exist in true epilepsy, and which evidently belongs to the disturbed circulation. Ergotinine proved efficacious also in two patients with epileptiform seizures after hemiplegia, and in a man ætat 79 with an apoplectic seizure; but it was powerless against maniacal excitement (three cases) in general paralysis. M. Ball, in comment, said that in his opinion cerebral anæmia was a cause of the epileptiform attacks, as well as hyperæmia. M. Charpentier had tried ergotinine without success, and was of M. Ball's opinion.

129. *Falret on Melancholia and its Different Forms.* —A great many forms of mental depression must be first isolated from melancholia, as formerly understood, *e.g.*, the form allied to general paralysis, the subacute alcoholic delirium of Lasègue, the melancholy periods of "folie circulaire" (softening apoplexy), hysteria, epilepsy and toxic agents; the "delirium of persecution," so well described by Lasègue. After elimination of all the above, the term melancholy remains still a very comprehensive one. M. Falret divides it into three:—(1) *Conscious melancholy*, a kind of moral hypochondriasis, usually intermittent; (2) *Depressive melancholy* (Baillarger, Delasiauve) going on to stupidity, as well as stupor, Delasiauve gives the differences. This melancholy begins with depression, and passes gradually into maniacal excitation, then into persistent stupor. Cure is common. (3) *Anxious melancholy.* — The patients groan much at first (Morel, Guislain), they walk about complain, sob, groan, repeat the same questions with despairing monotony. They have delirious conceptions of persecution, and other ideas, but this form is distinct from the delirium of persecution. Fear is the basis of this form, distrust is the basis of the delirium of persecution. E. J. EDWARDES, M.D.

130. *Crossfield on Epilepsy Caused by Intra-nasal Disease.*—The author points out the progress that has been accomplished in tracing the connection of certain nervous phenomena with disease in the nasal passages or pharynx. He then gives the notes of the case of a young American, aged 20, an accountant, with faultless habits, seen for the first time in August, 1886, who presented the following symptoms:—He was considerably emaciated, complexion sallow, had a hacking cough, which at night became paroxysmal and so severe as to greatly interfere with sleep. Headache almost constantly, night sweats occasionally, appetite varying, but most of the time poor. For six years had an epileptic seizure about twice a month, sometimes oftener. The family history was exceptionally good. He was very ambitious, but had no confidence in himself whatever. He shunned society, and seemed to be in a state of constant apprehension. For six years he took bromides in some form most of the time, with cod liver oil, hypophosphites, and various cough mixtures, without any apparent benefit. The author suspected phthisis, but the most careful and painstaking examination of the lungs revealed nothing to warrant such a diagnosis. Large and small mucous râles were heard indistinctly on both sides of the chest; they were inconstant and changeable as to situation. Heart normal. The epileptic attacks increased in frequency, notwithstanding the administration of bromides in various doses, with good tonics and nutritious diet. On one occasion the patient seemed to be breathing with some difficulty, and the author then ascertained that for years he had breathed almost entirely through the mouth. Becoming habituated to the habit, it gave him no great discomfort. He remarked that he never should have thought of consulting me for that, as he could not remember ever breathing any other way. Examination of the anterior nares showed: right side, marked hypertrophy of the inferior turbinated body, with almost complete stenosis. Left side, marked deviation of the septum, with some exostosis, in the form of a sharp angle, which pressed against the inferior turbinated body, which was also considerably hypertrophied. The mucous membrane throughout a deep reddish hue, and bathed with a muco-purulent secretion, which was abundant, especially in the left nostril. The exostosis and deviation of the septum to the left, leaving a space beneath, permitted more air to pass through the left nares. Examination of the posterior nares showed a mass of hypertrophied adenoid tissue of the naso-pharynx, with marked enlargement of the pharyngeal tonsil. The membrane of the pharynx presented a granular appearance, venous engorgement giving the parts a deep reddish colour. There was some thickening and elongation of the uvula and also slight enlargement of the tonsils. All of these changes more marked upon the right side. Hoarseness was rarely present in this case. The pathological changes in the larynx were found to be slight. There was some venous congestion, with very slight enlargement of the epiglottis. He removed the hypertrophied membrane of the inferior turbinated bodies on both sides with the galvano-caustic snare, and afterwards a portion of the right inferior turbinated bone with the Bucklin saw. The exostosis of the septum on the left side was also removed with the nasal saw. Finding the left nasal space still too contracted, he straightened the deviation of the septum by means of the punch and forceps. The adenoid growth in the naso-pharynx was removed entirely in three operations with the pharyngeal cutting forceps. As a result of this treatment the general health began to improve rapidly, The cough ceased, the appetite returned. In six months the patient gained 20 lbs. in weight, and had but one epileptic seizure, and that during the early period of the treatment. It is now three years since the last treatment, and he is perfectly well, and has had no more attacks of epilepsy. The second case consulted him in December, 1888. The patient, a young man 17 years old, was well nourished, but had had epilepsy since the age of 9 or 10. His general health had not suffered materially. This patient, like the first, had been under treatment for his epilepsy constantly, without apparent benefit. There was absolute nasal stenosis, with the consequent oral breathing. The nasal septum was quite straight, The right and left inferior turbinated bodies were hypertrophied, filling the cavities. There was some enlargement of the pharyngeal tonsil, but not enough to require surgical interference. The pharynx, as a whole, was very little implicated, and the larynx not at all. The epileptic seizures were frequent, occurring two or three times a week, and occasionally one or

more a day. The hypertrophied membrane of the turbinated bodies was thoroughly removed with the cautery loop and knife. After the first operation the fits were less frequent. The second case, unfortunately, passed out of his hands; but, so far as he had been enabled to ascertain, there had been no return of the attacks for at least five months.

Gynæcology and Obstetrics.

RECENT PAPERS.

131. **Bennington**, Mr.—On a Case of Varicose Veins in the Vagina. (*Med. Press*, Jan., 1890).

132. **Misrachi**, Dr.—On Antipyrin in Obstetrics and Gynæcology. (*Jour. de Med. de Paris*, Jan. 1890.)

133. **Rodriguez**, Dr. J. M.—On Atmospheric Pressure as a cause of Retention of the Placenta. (*Gaceta Medica*, Mexico: Dec., 1889.)

134. **Mundé**, Dr.—On the Use of Electricity in Gynæcology. (*Med. News*, Jan. 25, 1890.)

135. **Bovet**, Dr. Charles.—On Pulsatilla in Dysmenorrhœa and Ovaralgia (*Obstet. Gazette.*)

136. **Sinclair**, Dr.—On a Case of Fibroid Tumour of the Cervix Uteri. (*Medical Chronicle*, Jan., 1890, p. 283.)

137. **Ouchterlony**, J. A. A. M., M.D.—On Two Cases of Puerperal Tetanus (*Amer. Practitioner*, 18 Jan. 1890.)

138. **Davis**, Dr. E. P.—On the Use of the Obstetric Binder (*Med. Register*, Jan. 25, 1890.)

Art. 131. *Bennington on a Case of Varicose Veins in the Vagina.*—The author records that in April, 1880, a woman called to engage him to attend her in her second confinement, which was expected in about four months. She stated that during her first pregnancy she had occasional attacks of flooding. On May 9th, the author saw her again, when she complained of a sense of weight and fulness in the womb. On making a vaginal examination, the vagina was found full of structures, that felt exactly like soft movable sausages; and, on inspection, the labia were found to be much enlarged, with varicose veins everywhere apparent, and as large as the fore-finger. She was told to keep in a horizontal position with the pelvis raised; but while standing talking to the author, a great flow of blood took place, lasting about a minute. On examining, the previous condition of varicose veins had entirely disappeared. The patient rested after this for some days, but on May 27th another attack of hœmorrhage; and on June 25th she sent for Mr. Bennington in a great hurry. On his arrival, he found the membranes had ruptured, the liquor amnii drained away, and an arm in the vagina. Chloroform was administered, the arm pushed up, and the child turned and delivered, but it was dead. The mother made a good recovery. On Oct. 10th, 1881, the author again attended her; the presentation was normal, but the labour was lingering, and forceps were necessary. During this pregnancy, although there was considerable varicosity of the parts, there was no hœmorrhage. This case presents several points of interest. The bursting of varicose veins is usually considered very serious, but here it seemed to produce no bad results; the question is also raised as to whether any of the cases of irregular losses of blood per vaginum, so-called menstruation during pregnancy, or some cases of accidental hœmorrhage, may not be accounted for in a similar manner.

Richard Neale, M.D.

132. *Misrachi on Antipyrin in Obstetrics and Gynæcology.*—The author claims that antipyrin is a valuable means of combating the colic of menstruation, but it is necessary to pay attention to its indications. It is inefficacious when painful menstruation is dependent upon grave affections of the uterine appendages, and it may be contraindicated when dysmenorrhœa is complicated with scanty menstruation. Not more than 2 grm. should be given and this in two doses; in dyspeptic patients it should be given by enema. Latterly the attempt has been made to alleviate the pains of parturition by the administration of antipyrin, and authors have reached very contradictory conclutions regarding its applicability. In twenty-one cases where the reporter has thus employed antipyrin in large doses by the mouth, by the rectum or by hypodermic injection, he has obtained notable relief in only six instances. Antipyrin, then, is not an obstetrical anæsthetic. Its useful action is only obtained in certain painful complications of labour such as uterine contractions accompanied by exaggerated pain, as is observed in posterior positions of the vertex, premature rupture of the membranes, spasmodic contraction of the cervix, etc. If the action of antipyrin is inconsiderable in the pains of labour, it has, on the other hand, a very marked effect upon the after pains. Whatever may be the cause of these pains, antipyrin has succeeded in more than eighty per cent. of the cases, and its action is absolutely constant when the pains are provoked and kept up by the administration of ergot. He makes only one exception to this rule, and that is in cases where there is a retention of a portion of the secundines or a clot. In such cases the first thing to do is to empty the uterus and give hot irrigations, after which the antipyrin may be given with excellent results in relieving after pains.

133. *Rodriguez on Atmospheric Pressure as a Cause of Retention of the Placenta.*—The author explains a theory of Dr. P. Gavilan, of Durango, with regard to certain cases of retention of the placenta by *atmospheric pressure.* He, in such a case, having introduced the hand into the uterus, found it impossible to loosen the borders of the placenta; so, with his fingers, he pierced the central part of it, when at once, before he had time to make traction, the after-birth lay loose in his hand. He thinks that when the edges of the placenta adhere too firmly, and traction is made on the cord, a vacuum is formed in the centre; when the air enters, by introducing the finger, the placenta is expelled. Certain cases in his own practice seem to confirm the view, and analogous cases have been recorded which might be explained by this theory.

134. *Mundé on the Use of Electricity in Gynæcology.*—In a recent discussion on the use of electricity in gynæcology, before the New York Academy of Medicine, Dr. Mundé said he could speak most decidedly in favour of electricity as a therapeutical agent in gynæcology. He had seen more benefit derived from galvanism than faradism in gynæcological practice. He had also found that mild currents used for a long time are, as a rule, more efficacious than strong currents employed for a short time. He used a Leclanché forty-cell battery. For ordinary purposes he used a small meter registering only twenty milliamperes. He had another which registered 500 milliamperes, This he had used a few days before in treating a fibroid.

and had found it faulty and untrustworthy. With galvanism, placing the positive electrode next to the sensitive part in the pelvis, or on the abdominal wall, he had obtained excellent results in relieving the pain of chronic pelvic peritonitis. In old cases of inflammation with adhesions, with more or less pain in the ovaries and tubes, he had found that the tri-weekly administration of electricity, with the positive current internally, was a decided benefit after a few months of treatment. On the other hand, a number of patients, after several months of such treatment, had received no appreciable benefit whatever, and laparotomy had to be performed. This showed that electrical treatment was not suited to these particular cases. However, he deemed it proper in all circumstances to give patients every opportunity for possible benefit from electricity before subjecting them to a radical operation which, by whoever performed, could never be without an element of danger. In obscure pelvic pain, due to an inflammatory deposit unrecognizable by digital examination, extending down the sciatic or crural nerves, he had seen instant relief follow the use of electricity after other treatment had failed. While he relied on electricity, and had found it of great benefit, especially in relieving pain, he thought it might be carried too far. He considered the length of time necessary to achieve satisfactory results was a great drawback to the use of electricity. If it was clear, however, that some good was being done, the time was, of course, not lost. As to the milliamperemeter, though he had two, he was by no means satisfied that it was at all necessary, and was inclined to look upon it as a sort of plaything. When using galvanism for the relief of pain, the sensations of the patient, he thought, were a sufficient guide as to the strength of current to be employed: but when using the current in anæsthetized patients or for galvano-puncture, it was necessary to know exactly the strength. The faradic current he had found very useful in amenorrhœa, intra-uterine faradization being employed three times a week for this purpose. He had used electricity but once in extra-uterine pregnancy, the interrupted galvanic current being the one employed. He had cured the patient, after nearly killing her by the shock. In pyosalpinx and pelvic abscess, laparatomy and drainage were certainly to be preferred to galvano-puncture. As to uterine fibroids, he had very decided views. He considered that the value of operative treatment in this class of cases was over-estimated. Out of 123 cases coming under his observation, about 50 per cent. had required no treatment whatever. Sixty-two had required treatment, but only 8 of this number, in his opinion, had required Apostoli's method, and 4 others called for galvano-puncture. Apostoli's plan of treatment covered only the intra-uterine use of galvanism, with the clay electrode on the abdomen, the galvano-puncture being not strictly his method. He had used the Apostoli treatment eight times in three years, and he could honestly say that while he believed it efficient for the removal of pain and the checking of hœmorrhage, and admitted that the patients felt better for its use, not a single tumour which had come under his notice had been much reduced in size. By galvano-puncture he meant puncture through the vagina, and this, in his opinion, was the ideal treatment for the cure of uterine fibro-myoma. The four cases in which he had employed it had been absolutely cured, that is, the tumours disappeared entirely, not a vestige being left. In one of the cases a single puncture gave rise to sloughing, and this sloughing itself destroyed the growth; in the others the cure was directly due to the effects of the electrical treatment. He was, therefore, a decided believer in galvano-puncture. At the same time, he believed it had its risks, and he thought it should never be employed in a consulting room.

ALFRED S. GUBB.

135. *Bovet, on Pulsatilla in Dysmenorrhœ and Ovaralgia.*—The author states that he has found the most active preparation to be the alcoholic extract, made from plants gathered fresh in June, and composed of equal parts by weight of the plant and of 90 per cent. alcohol. The glucoside obtained from the plant, and called anemonin, is less active than the extract. As regards the method of using the remedy: if the case is one of dysmenorrhœa, he gives the patient, four days before the beginning of the expected period, four tablespoonfuls of a wine which contains about ten drops of the alcoholic extract of pulsatilla to the tablespoonful. As soon as menstruation begins, the use of the drug is to be discontinued for three or four days, and then resumed for three or four days in the doses employed at the beginning. Recovery from dysmenorrhœa is frequently observed after following this practice for two months. If chlorosis exists along with dysmenorrhœa, Bovet gives chloride of manganese also, in doses of five-sixths of a grain to the tablespoonful of the wine of pulsatilla. In cases of ovaralgia, as the result of chronic infarct of the uterus or inflammation of the neighbouring structures, the pulsatilla wine is given continuously, in moderate doses, until the pain completely disappears. The author states that complications are never observed in the course of the treatment. Anemonin was given in doses of from five-sixths of a grain to one and one-half grains a day, and never in a larger dose than three grains. It is more uncertain in its action than the alcoholic extract, probably because changes in its constitution take place when it is kept a long time.

136. *Sinclair on a Case of Fibroid Tumour of the Cervix Uteri.*—Dr. Sinclair records the case of a woman, aged 40, who was admitted into hospital, suffering from severe and nearly constant hemorrhage from the uterus. Five years previously she commenced to suffer from a white discharge and bearing down pains; the discharge gradually became more and more coloured; menstruation had always been painful, but it had lately become worse, and the bearing down pain increased, and for the last six months the bleeding and pain had been nearly constant; her appearance was suggestive of suffering and anæmia. On examination a large mass was found in the vagina attached to the posterior lip of the cervix, which felt like a malignant growth. On a careful examination with the speculum it was ascertained to be a fibromyoma occupying the extreme lowest portion of the cervix. The anterior lip was also noticed to contain a small fibroid tumour on its anterior surface. A few days after admission the patient was placed under an anæsthetic, and the author dissected the growth from its attachment. It was found to implicate only the cervix, the uterus itself not being involved at all. The enlargement on the anterior lip was then seen to be due to a small fibroid nodule, about the size of an almond, situated just beneath the mucous membrane and entirely in the vaginal portion of the cervix. This was easily enucleated, and the edges of the incision were brought together with silkworm gut sutures. The chasm in the posterior portion was also brought together with silkworm sutures passed antero-posteriorly, as in Emmet's

operation. After the operation the patient made an excellent recovery. Cases of fibroid tumours of the cervix uteri are rare. RICHARD NEALE, M.D.

137. *Ouchterlony on Two Cases of Puerperal Tetanus.*—Case 1. Patient was 23 years of age. Three years before she had her first child; labour natural. One year ago she had a miscarriage. The last labour took place at full term, and was perfectly natural. Ten days later she got up, but did not feel well; she had rigors, and took to bed again. There was no pain or tenderness in the lower part of the abdomen; urine somewhat scanty; lochia abundant and offensive. The next day she complained of soreness in the muscles of mastication, and trismus and tetanus developed, which rapidly terminated in death. Case 2. This patient was twenty-four years of age. Her first labour, which was normal, occurred three years before; one year before she was again delivered, but with forceps. In the last labour there was transverse presentation; delivery was accomplished by version, and completed by the use of forceps under chloroform. On the fifth day she had chilliness; lochia offensive; difficulty in micturition. Five days later there was stiffness in the masseter muscles in both sides, with tenderness; trismus and tetanus ensued, terminating in death three days later. In the pelvic cellular tissue, behind the rectum and between it and the sacrum, was an abscess containing about 100 cc. of pus. There was purulent infiltration of the connective tissue surrounding the abscess. Projecting venous thrombi were found over the placental site. As evidence of direct infection of tetanus, it seemed probable that the disease had arisen from absorption of ptomaines, developed in retained and decomposing portions of the placenta. Somewhat in favour of this view appears the fact that there was temporary arrest of the disease after the uterus had been thoroughly washed out.

138. *Davis, on the Use of the Obstetric Binder.*—A good deal of difference of opinion exists as to whether a binder should be applied or not, after childbirth. This depends entirely on the patient and her condition. Where you have a stout, healthy woman, with well-developed abdominal walls, a binder is entirely unnecessary if there is no lack of tonicity after delivery. On the other hand, if the parietes lack tonicity and are not well developed, or if there is danger from *post-partum* hœmorrhage, it should be applied firmly and efficiently. Very few nurses, and, in fact, few physicians, know how to apply a binder properly. A binder should be made of good soft material—not elastic—that is sufficiently long and broad. Apply it to the abdomen from the lower part of the sternum to a point below the crests of the ilia. Begin above and pin downward, drawing it sufficiently tight to act as a support. Use safety pins, one for every one or two inches, and make the binder free from wrinkles. In cases where *post-partum* hœmorrhage threatens, or has taken place; or where the uterine walls are not firmly contracted, place pads around the uterus and pass the binder firmly over these, to bring pressure to bear on the organ. Pin the pads to the binder to hold them in place. Allow the binder to pass well down, so that it may grasp the hips below the iliac crests. Never pin the binder from below up, always begin at the top. There is a belief in the minds of many women that the binder preserves the figure, and it may be well to apply it in all cases to satisfy this idea unless there are special reasons for not doing so.

Dermatology.

RECENT PAPERS.

139 INTERNATIONAL CONGRESS FOR DERMATOLOGY AND SYPHILIS.— On Pemphigus and the Bullæ. (*Annales de Derm. et de Syph.*, vol. x., No. 11.)

140. JACQUET, M. — On the group Lichen. (*Annales de Derm. et de Syph.*, vol. x., No. 10.)

141. VERGELY, M.— On an Excipient for Local Applications in Dermatology. (*Journal of Cutan. and Genito-Urin. Dis.*, vol. iii., No. 85.)

142. TÖRÖK, Dr.—On Lichen Planus (*Annales de Derm. et de Syph.*, vol. x., No. 12.)

143. QUINQUAND, Dr. — On the Composition of Squamæ (*Annales de Derm. et de Syph.*, vol. x., No. 12.)

144. LASSAR'S Treatment for Baldness. (*N. Y. Med. Rec.*, Jan. 19, 1890.)

145. DELIGNY. Dr.—On the Ætiology of Psoriasis. (*Rev. Gen. de Clin. et de Therap.*, Jan. 9, 1890.)

146. GRAHAM, Dr.—On a Fatal Case of Zoster (*Journ. of Cutan. and Genito.-Urin. Dis.*, vol. vii., No. 86.)

147. MORROW, Dr.—On Leucoderma and Leprosy (*Journ. of Cutan. and Genito.-Urin. Dis.*, vol. vii., No. 86.)

148. SCHMIDT and BRUNS.—On the alleged Micro-organisms of Mycosis Fongoide (*Journ. of Cutan. and Genito.-Urin. Dis.*, vol. vii., No. 87.)

149. SHERWELL.— On a Simple Method of Treating Scabies (*Journ. of Cutan. and Genito.-Urin. Dis.*, vol. vii., No. 87.)

150. HAWKINS on The Occurrence of a Rash in Influenza.

151. ROSENTHAL, Dr.— On a case of Localized Scleroderma combined with Hemiatrophy Facialis and Alopecia Areata. (*Berliner klinsche Wochenschrift*, August 26th, *Journal of Cutan. and Genito-Urin. Dis.*, vol. vii. No. 85.)

152. MCLAUGHLIN, Dr. — On The Therapeutic Effect of Sulphide of Arsenic in Diseases of the Skin. *Jour. of the Amer. Med. Assoc.*, Dec. 1889, p. 897.)

139. *The International Congress for Dermatology and Syphilis.*—At this Congress, Pemphigus and the group of Bullæ were discussed. There were expressed two clearly contradictory opinions. The first is mainly supported by MM. Brocq and Unna, who adopt, in a very modified form, the ideas of Duhring, viz., the recognition (in the confused group of bullous affections) of a dermatosis corresponding to a clinical type of morphology, and having a fixed mode of evolution, dermatitis herpetiformis. The disease has already been studied in other countries, under different names, by several authors (Tilbury Fox and Bazin, amongst others), but with less care and precision M. Kaposi appeared to be the sole supporter of the second opinion. He considers dermatitis herpetiformis to be a purely artificial creation, that its diagnosis is perplexing, that it is a kind of *caput mortuum*, and that it ought to be distinguishable from pemphigus, erythema multiforme, impetigo herpetiformis, etc., etc., which in themselves constitute separate entities. The majority did not seem to agree with his opinion.

140. *Jacquet on the Group Lichen.*—At the International Congress for Dermatology and Syphilis held at Paris in August, 1889, the constitution of the group lichen was fully discussed. From the discussion, it seems, in M. Jacquet's words, to result:—1 That the affection to which the name lichen should be specially applied is the lichen planus of E. Wilson, a kind of dermatosis with numerous solid papules arising from the cutis, and having a definite evolution. 2. That the lichen ruber of Hebra has nothing in common with pityriasis rubra pilaris. 3. There must be placed side by side with the lichen planus of E. Wilson a series of dermatoses, nosologically very similar, whose resemblance to the disease of Wilson is very evident, but not well defined, and amongst them: lichen ruber acuminatus, or neuroticus; lichen ruber obtusus; mixed lichens, blendings of the preceding forms; hypertrophic, hyperkeratosic, or horny, atrophic lichens, etc., exaggerations or deviations from these various types.

141. *Vergely on an Excipient for Local Applications in Dermatology.*—M. Vergely has recommended a modification of the local applications of Unna. The preparations of the latter are sometimes difficult to make, and have a granular consistency. Mr. Vergely avoids this difficulty, and obtains a more perfect homogeneity in the following formula:—R. Gelatin, 5·0; glycerinæ; aquæ, āā 45·0. This mixture is flexible, adheres to the skin, and is useful as a vehicle for powders, as calomel, oxide of zinc, red precipitate, etc.

142. *Török on Lichen Planus.* — The author describes in the following manner the lesions of lichen planus. At the commencement the papule is produced only by the lesions, which are limited to the upper layers of the chorion, in the immediate region of the subpapillary vascular network. Round cells encircle the swollen vessels, and œdema is manifested by increase in the size of the lymphatic spaces. At this period no trace of proliferation of the epidermis is visible. The inflammatory phenomena extend to the periphery, whilst the intermediate parts, which are the first affected, return to their normal condition, or, whilst the inflammatory lesions of the upper parts of the chorion diminish, the epidermis presents, in its turn, hyperplastic alterations. The umbilication of the smallest papules is produced by the adherence of their central part to the canal of a sweat gland, or, more rarely, to a follicle, whilst the adjoining parts are raised by the swelling of the papillary body. The central depression of the large papules results from the depression of the papillary body, which is itself determined stretching of the epidermis, the thickening of the corneous layer, and the desquamation of its upper portions. The depression of the annular plaques is caused by the atrophy of the papillary body. In several papules small homogeneous bodies are found which should probably be regarded as a hyaline production of the connective tissue or of the exudation.

143. *Quinquand on the Composition of Squamæ.*—The author has analysed scales which had fallen from the skin of several patients affected with cutaneous exfoliating affections. He has found in 40 to 50 grammes of scales shed in a day a total of 14 to 15 grammes of nitrogen. The scales contain also a considerable proportion of carbon and sulphur in the form of an organic compound, the nature of which is still undetermined, but which is certainly not a sulphate. He has also examined animals suffering from artificial dermatitis, and in them has found a diminution in the gases of the blood (chiefly carbonic acid), an accumulation of urea in the blood, and a diminution of urea in the urine. As a result of his researches he concludes that in exfoliating dermatoses there is a necessity for abundant alimentation and inhalations of oxygen.

144. *Lassar's Treatment for Baldness.*—First Stage: A strong tar soap is applied to the scalp for at least ten minutes. Second Stage: Removal of soap by a tepid water douche, the water to be gradually cooled, the scalp to be well dried afterward. Third Stage: The scalp to be shampooed with the following solution:—

℞ Hydrarg. bichlorid. .... gr. x.
Glycerin. ....
Spirit. rect. ....āā ʒ ij.
Aq. destil. .... ℥ v.
F. fiat solutio. S. : For ext. use.

Fourth Stage: Shampooing of head with absolute alcohol, to which half per cent. of naphthol has been added. Fifth Stage: The following solution to be well rubbed into the skin:—

℞ Acid. salicyl. .... gr. xxx.
Tinct. benzoin.................................. ʒ j.
Ol. ped. taur ....ad ℥ iij.

145. *Deligny on the Ætiology of Psoriasis.*—The author, in the course of seven years' observations at St. Gervais, noted 54 cases of psoriasis, more particularly from the point of view of the ætiology. In 12 of these 54 cases he found a history of psoriasis in the ascendants; four times in the father, twice in the mother; four times in the grandparents, and twice in uncles. Some allowance must be made for the fact that sufferers from psoriasis often do their best to conceal the existence of the affection: but even then the influence of heredity is evidently less marked than has been supposed. The author joins issue with Dr. Kaposi in his view that psoriasis is an inherited predisposition of the skin, the existence of such a localised predisposition being, in his opinion, inconsistent with our notions of pathology. Nine of the 54 patients developed symptoms of gout previous to the appearance of the psoriasis; 21 had had rheumatic manifestations; 15 had had rheumatic affection of the joints during infancy, and belonged to families with distinctly arthritic tendencies; and in 9, no pre-existing manifestation or diathesis could be ascertained. From the foregoing figures no less than 36 of the 54 patients with psoriasis had suffered either from gout or rheumatism, bearing out the view that these diatheses stand in a causal relationship to the affection of the skin. ALFRED S. GUBB.

146. *Graham on a Fatal Case of Zoster.*— At the last meeting of the American Dermatological Association, in which zoster was discussed. Dr. Graham mentioned a fatal case in a boy whom he had treated. There were febrile symptoms and pain preceding the eruption by three days; on the fourth day there was severe pain on the opposite side, and on the fifth day the patient died suddenly. The autopsy showed intense inflammation of the gasserian ganglia on both sides, and a bacillus was found, which he had not yet named.

147. *Morrow on Leucoderma and Leprosy.*—At the last meeting of the American Dermatological Association, Dr. Morrow, in differentiating the salient features of leucoderma and lepra, stated that in leucoderma the hairs were for the most part white, while in lepra they were not, as a rule. He stated that in the Sandwich Islands one-half of the cases were tubercular, one-third were of the anæsthetic type, and the remainder mixed.

148. *Schmidt and Bruns on the alleged Micro-organisms of Mycosis Fongoide.*—Messrs. Schmidt and Bruns examined the tissues in a case of Dr. Blanc's. They were not able to discover in the tissues any micro-organism which could be considered even as a possible cause of the disease, though both observers examined many sections for this purpose, and Dr. Bruns paid particular attention to this point.

149. *Sherwell on a Simple Method of Treating Scabies.*—The author said that sulphur was the drug he advocated, but the mode of its employment was what he called attention to. Dry sulphur was used, the patient dusting the body as well as the bed clothes with it. Thus eczema and dermatitis were avoided. A mild oil, as that of sweet almonds, may be applied to the body before the dusting process. This method is especially good where all the family is affected. Eight cases have been thus treated during the past thirty days, with good results. G. Thin, M.D.

150. *Hawkins on The Occurrence of a Rash in Influenza.*—In *The Lancet*, Jan., 1890, Dr. Hawkins recorded six cases of influenza, out of nearly 1,000 cases treated at St Thomas's Hospital, in which an eruption was noticed, presenting in each case a certain degree of similarity in appearance and position. One of the cases is thus described:—J. C. came to the hospital with a roughly circular patch slightly raised over the back of each elbow, passing at its periphery into patches and spots of similar appearance, especially numerous along the back of the forearm. The colour of the rash resembled that of measles, and disappeared completely under pressure. A similar condition existed on the legs. There was a slight flush on the chest. A few days later, while the rash on the arms was fading, a crop of spots arose on the backs of the hands, of artificial appearance, but they did not itch. (I may add that, in my own practice, I have seen three or four cases with a similar rash, and in one patient the rash extended from the neck to the ankles, all over the trunk, arms, and legs, while the face, wrists, and dorsum of the feet were free; but whenever the rash appeared there was considerable itching).

Rich. Neale, M.D.

151. *Rosenthal on a Case of Localized Scleroderma.*—Dr. O. Rosenthal relates the history of a patient affected with the above disease. A girl, aged seven and a half years, fell from a wagon when six months old. At the time she had on the left side of her neck a furuncle. When she was about four years old her mother noticed white spots on the left side of her neck. Similar spots appearing later on the scalp and face. Spots of alopecia showed themselves on the scalp in the past summer, and an atrophy of the left half of the face has been visible since the past winter. The affection was limited to the left half of the head and neck. Patches of scleroderma extend from the anterior border of the left sterno cleido-mastoideus muscle to the middle line of the neck. They are slightly infiltrated. Behind, patches of scleroderma are present, bordering on the hair and face. On the right side of the neck localized patches of scleroderma are present. Many of the hairs of the left eyelid have disappeared, and those of the lower lid are completely gone. A number of bald spots are found over the left half of the head. There are also several spots of pigigmentless hair. The skin of the left half of the face is shiny; its sensibility is preserved, as is also the secretion from the sweat and sebaceous glands. A similar case was presented by Dr. Gibney, before the New York Dermatological Society in 1879, in which a girl of nine showed the same symptoms, together with scleroderma in the region of the left sciatic nerve. As these diseases have been assigned to a tropho-neurotic disturbance, Dr. Rosenthal is disposed to look upon their association as the result of a common cause.

152. *McLaughlin on The Therapeutic Effect of Sulphide of Arsenic in Diseases of the Skin.*—Dr. McLaughlin contributes a paper on the value of Sulphide of Arsenic. The drug was tried as an experiment in the crude form known as Realgar $As^2 S^2$; it was given in granules of $\frac{1}{100}$ grain. In one patient, who had suffered from psoriasis, more or less, for twenty years, the drug proved of great service. This patient had been unable to take the usual preparations of arsenic, as they produced great irritation in a very short time. When he commenced to take the drug, he suffered from an eruption over the arms, back, head and forehead, his hands were covered with fissures which would bleed whenever the fingers were extended; the nails were black and roughened. After taking the granules for one month (first one three times a day and increased gradually to eight granules three times a day), the hands had greatly improved, the fissures were entirely healed, and the face was practically well. The drug was then stopped for one week, during which time the eruption began to extend very rapidly. The granules were again given, and in a few days the improvement was marked. The general health soon improved, and the patient now feels that he has obtained a remedy which will exert, at any rate, a controlling influence, if not a cure for his disease. In another patient who had suffered from psoriasis for six years, bnt would not take arsenic on account of the gastric irritation it produced, the granules produced a marvellous improvement in a few weeks, and he was able to take eight granules three times a day, without any gastric trouble whatever. In cases of acne and furuncles the author has found the disulphide of arsenic more satisfactory than sulphide of calcium; in eczema he has also obtained satisfactory results, and in every case in which it has been used, the patient is entirely unaware that arsenic is being administered.

Anatomy and Physiology.

RECENT PAPERS.

153. Mingozzini, Prof.—Contributs alla conosceuza della fibre muscolares striata. (*Anat. Augeiger Johrg. IV.* No. 24. S. 742.)

154. Raon, Dr. E.—Gmedien über die Entwicklung des Zuercufells und der Benachbarten Organe-beiden Wisbeltbiesen. (*Arch. f. Anat. u Entwick*, Jahrg. 1889, *suppl.* Bd. s. 270.)

155. Raon, Dr. E.—Untersuchungen über die Entwicklung des Diaphragmas und die Benachbarten Organe-beiden Wisbeltbiesen. (*Arch. f. Anat. u Entwick*, Jahrg. 1889, hfr. 5, u. 6, s. 412.)

156 Griffiths, Dr. J.—The Prostate Gland: Its Enlargement or Hypertrophy. (*Journ. of Anat. and Phys.*, vol. xxiv. p. 236.)

157. Blumenau, Dr. E.—On the Influence of Alcohol on Digestion. (*Wratch.*, No. 42, 1889.)

158. ALBERTONI, Prof. — Sub-contegnse sull' Azione degli Zuccari nell Organismo. (*Mem. della. R. Acc. delle Scienza Bologna*, ser. iv. tom. ix., p. 65.)

159. EDWARDES, Dr.—On a Case of Mediastinal Cancer in a Child. (*Archives of Pedriatics*, vol. vi., No. 67.)

ART. 153. *Mingozzini on the Striped Muscular Fibre.*—(1). The growth in length of the striped muscular fibre is determined by the nuclei which are generally at its extremities, or at its central axis. They are most numerous in the embryo, less so in the adult. (2). Its growth in volume is determined by the nuclei, which are found along the course of the fibre, or in its periphery, or in the internal interstices. The protoplasm which surrounds them, abundant in the stages of growth, scarce in great or less degree in the completely developed fibre, gives origin to new fibulla. (3). The fibulla are formed from the protoplasm which is nearest to the nucleus, and are the more developed the further they are removed from it. (4). Those fibres which contain either a central canal, with protoplasm and nuclei (many asthropods) or nuclei scattered as much in the interior of the contractile substancce as in the periphery (many asthropods, amphibious, reptiles and some birds) must be considered, historically, less developed ; while there must be considered more evolved, in which the muscular capsules are found origin the periphery (seleortei, some birds and mammals) since the former present resemblance to the embryonic condition of the fibres of higher animals.

154. *Raon on the Development of the Diaphragm.*— (1) The horse-shoe shaped form of the meso-blast free portion of the germinal area (the proamnion) brings it to pass that the smaller cranial part of the body cavity, that part, namely, which lies within the concavity of the horse-shoe, or the pleuro-pericardial cavity, is closed from the commencement to the external borders of the embryonic disk, whilst the larger caudal part, which stretches caudally from the mesoblast-free region, is not closed as the external border of the embryo, but extends in an unbroken wave into the non-embryonic portion of the body cavity. (2) Originally there is no septum within the body cavity, that which first appears, the mesocardium laterale of Kölliher lies in the pleuro pericardial cavity and binds its somatic to its splanchinic wall. It serves for the conveyance of the venous blood from the dorsal and external wall of the cavity to the heart. (3) The cranial and caudal portions of the cavity communicate with one another dorsad and ventrad to this septum. The ventral communication soon closes at the caudal end, and belongs to a part of the pericardial cavity ; the dorsal, on the contrary, corresponds to the part of the body cavity containing the lungs.

155. *Raon on the Diaphragm in Lacesta Viridis.*— The eventual part of the septum between the thoracic and abdominal cavities, or the septum between the pericardial and peritoneal cavities is completly formed in this animal, whilst the two dorsal parts, or the septa between the two pleural caribes and the peritoneal cavity fail, or, at least, are only quite rudimentary. The septa between the pericardial and pleural caribes or membranœ pleuro-pericardiacœ are present.

156. *Griffiths on the Prostate Gland.*—(1) Enlargement or hypertrophy of the prostate gland results from a growth of the gland-tubules with their associated muscle, so as to form new gland-substance, closely resembling in its structure the normal gland. This constitutes the first or glandular stage. (2) After a variable time, degenerative changes set in, which ultimately convert the new tissue into a mass of more or less dense, fibrous, connective tissue, containing only the atrophied remains of the glandular and muscular elements. This constitutes the second or fibrous stage. (3) No enlargement takes place behind the urethra except when glanular substance exists behind and above the level of the verumontanum, in the situation of the " third " or median lobe. (4) The so-called " tumours " are not in reality *tumours*, but merely pronounced localised enlargements of the gland, which pass through the same stages as the gland when enlarged as a whole. (5) True muscular tumours (myomata) do sometimes, though rarely, arise in the substance of the prostate gland, but that they are pathologically different from the ordinary local or general enlargement of the gland.

157. *Blumenau on the Influence of Alcohol on Digestion.*—The author carried out a series of observations on five healthy young men, of ages ranging from 22 to 24. Within from ten to twenty minutes after a meal he gave them 100 cc. of alcohol, of a strength of from 25 to 50 per cent. The results are tabulated as follows :—(1). At the commencement of digestion the effect of alcohol is to lessen the action of the gastric juice, the digestive properties of which are markedly impaired. (2). The effect is more noticeable in those not accustomed to take alcohol. (3). The diminution in the activity of the digestive process is in direct proportion to the strength of the alcohol. (4). In the fourth hour of digestion the digestive process increases in activity, the acidity of the gastric juice being considerably in excess of the normal. (5). The amount of gastric juice secreted is larger and the secretion persists longer than under ordinary circumstances. (6). The movements of the stomach are slowed in proportion to the amount of alcohol injected.

158. *Albertoni on the Action of Sugar on the Organism.*—The quantity of glucose which can be absorbed from the gastro-enteric canal under normal conditions, is 60-65 gr. per hour according to experiments made upon a large dog. Absorption takes place as much from solutions more dense than in those less dense than the blood. During the first hour of administration the quantity of sugar absorbed is extraordinarily greater than in successive hours. The density of the fluid which remains in the stomach is always diminished and less than that of the blood, its quantity is not proportional to that of the sugar. The accumulation of sugar in the blood induces modification of the circulating apparatus which follow, also upon equivalent quantities of glucose, maltose, or saccharose, but last different times, ending when the excess of sugar is eliminated. In the dog, after intravenous injection of sugar, the frequency of the pulse augments 15-20 beats a minute ; there is no increase if the vagi are cut. In man, administration of cane sugar by the mouth (100 gr.) increases the frequency of the pulse 6-8 beats per minute, and the effect is manifested in from 15 minutes to an hour, according to whether it produces nausea or not, since in the latter case there is first a slowing. Blood pressure increases under the administration of glucose, maltose, or saccharose 15-20 per. mm. of Hg. This does not

depend on excitation of vaso-motor centres, nor on paralysis of the vagi, since pressure is equally increased if medulla and vagi are cut, wherefore it may be attributed to systolic activity of the heart. Sugar dilates the vessels, as is shown by the augmented volume of the organs, as shown in the kidney by Roy's method, and increases the quantity of blood which flows from a vein in the same time, the quantity being doubled. The velocity of the blood is much increased. Polyuria and glycosuria are equally intense when glucose or maltose are injected, and may be attributed to the dilatation of the renal veins, as Roy's oncometer shows, and to the action of the sugar on the urinary tubules. Morphia and chloral stop the manifestation of the effects of sugar on the circulation, but have very little effect on polyuria and glycosuria. These researches show that sugar must not be considered only as a food, but as an agent capable of modifying the functional state as described. In order that the heart may carry on its rhythmical movements, there are necessary in the normal condition not only apparatus, but also stimuli, irritating agents, which cause the apparatus to act. The sugar always present in the blood represents one of these irritants. The sugar which enters the blood at every meal exercises upon the circulation on irritant action as opposed to the depressing use of certain products of albuminoids, derivatives of peptones (peptina, Albertoni, peptossina, Brieger), which may be formed in the digestive process.

BERTRAM C. A. WINDLE, M.A., M.D.

159. *Edwards on a Case of Mediastinal Cancer in a Child.*—The patient was a boy, 11 years of age, and was first seen in the autumn of 1888. He complained then of shortness of breath on exertion, alternating with attacks of apnœa and syncope. His parents were healthy, and up to a recent period his own health had been fairly good, but he had never been robust. At the first visit he was noted as being anæmic, somewhat emaciated, and having a shrill voice. He complained of lancinating pains in the chest, and was subject to epistaxis. The blood corpuscles were counted and demonstrated a condition of profound anæmia. The sternum was unduly prominent over its upper portion, the corresponding interspaces being widened and showing diminished movement. Percussion over the same region showed dulness most marked towards the right. Vocal functions impaired. Respiration was jerky and slightly tubulous. The child grew worse; the voice became aphonic, the emaciation greater, feet and extremities œdematous, the right heart dilated, basal hypostatic congestion of the lung set in, and the child succumbed from exhaustion about six months after the first symptoms. There was never any singultus, dysphagia or vomiting. A partial *post-mortem* examination was made, and revealed a large medullary carcinoma of the anterior mediasterium. The remainder of the article is occupied with an analysis of 67 collected cases. From these the author concludes that the morbid affections of the mediastina occur in children in the following order of frequency:—1, sarcoma; 2, carcinoma; 3, abscess; 4, lymphoma. Further, that of the mediastinœ the anterior is the most frequently affected; that males are more frequently affected than females by mediastinal disease; and, finally, that whereas sarcoma and carcinoma are necessarily fatal, abscess is recovered from in one-third of the cases.

RALPH W. LEFTWICH, M.D.

Toxicology & Medical Jurisprudence.

RECENT PAPERS.

160. BROWN, DR. JOHN. — Unsuspected Lead Poisoning in Children. (*Brit. Med. Journal*, Jan. 25, 1890.)

161. ZALESKI, DR.—On a New Method of Determining whether a Child is Still-born or Not. (*Archiv. fur Kinderheilkundi*, bd. xi., hf. 1.)

162. MCPHEDRAN, DR. A.—On Multiple Neuritis from Arsenical Poisoning. (*The Canad. Pract.*, Jan., 1890.)

163. BOKAI, PROF. ARPAD.—On an Antidote for Morphine. (*Inter Klin Rundshan.*)

164. On Liabilities for Injurious Patent Medicines. (*Amer. Practitr.*, Jan. 18, 1890.)

ART. 160. *Brown, on Lead Poisoning in Children.*—For some years past a large number of cases of lead poisoning have come under the notice of medical men in Bacup, and for a time the cause was obscure. As medical officer of health for the borough it was Dr. Brown's duty to investigate the matter, and he found that the cases arose from contaminated water supply. Many of the cases attended were children, although he found that children are not so susceptible to the toxic influence of lead as persons between the ages of 15 and 50 years. Above and below those ages lead rarely produces the more severe cases of plumbism. This tolerance of lead in young children is, he considers, probably due to lead being a nerve poison, which acts primarily on the nuclei of the nerve cells, especially those of motor nerves. In some families, where the adult members were suffering from the severer forms of the disease, he found that the children only manifested slight symptoms of lead poisoning. In one house the father and mother were both suffering from lead palsy, colic, constipation, absence of the knee-jerk. The mother had saturnine epilepsy. Two children, aged 7 and 9 years, had the dark blue line; neither suffered from any symptoms calling for treatment. The water used for dietetic purposes by this family was largely polluted with lead. The chief symptoms of plumbism in children are constipation, colic, frontal headache, absence of the knee-jerk—which is not common—and anæmia, which is the most common symptom, and generally well marked. In the cases observed by the author there was only one severe case out of forty-two; this was a child aged 4 years. There was dark blue on the gums, severe colic, obstinate constipation, difficult and painful micturition, marked anæmia, tremor of the legs, which was followed by paresis, and ultimately paralysis. The father was suffering from plumbism; he had colic, constipation, epileptic convulsions, loss of vision, paralysis of arms, paresis of legs. The mother of the child was also very ill, but had no lead palsy. On analysis the water supply contained 1½ grains of lead per gallon. In looking up the literature of the subject Dr. Brown found that very little has been written on the influence of lead in children; indeed, in no work specially devoted to the diseases of children could he find any reference to plumbism.

161. *Zaleski on a New Method of Determining whether a Child is Still-born or Not.*—The hydrostatic lung test for determining whether a child was still-born, or died after birth, is generally admitted to be

unreliable. In fact, no one single test exists which can positively establish or deny as to whether a child was born dead or living. The author points out that in the first place, the fetal lungs only contain as much blood as is necessary for the nutrition of the pulmonary tissue, while the lesser circulation is only inaugurated after birth, and, as a consequence of this, the circulation in the lungs is in an instant many times increased. In the second place, the blood contains a constituent whose percentage is almost unalterable, and which is readily quantitively estimated—namely, iron. Therefore a lung in which the act of respiration has taken place will contain considerably more iron than one which has not respired. Dr. Zaleski, therefore, believes that from the amount of iron found in the lungs, it may be determined whether the child was born alive or dead. Dr. Zaleski has estimated the amount of iron in seven cases. Four were cases of unmistakable dead birth; three, cases of infants born alive. In the former cases the average total amount of solids was 13·22 per cent., and of these, in the fresh state iron was represented by ·0110; in the dry state, ·0828. Of the three cases born alive, the average solids were represented by 15·87, representing in the fresh state ·0188, and in the dry state, ·1182 per cent. of iron. In these cases the application of the hydrostatic lung test was very contradictory; one case, which was unmistakably still-born, giving a positive answer; another, which was unmistakably born alive, giving a negative answer. From his studies, Dr. Zaleski believes that he is warranted in drawing the following conclusions: (1) The per cent. of solids, as well as the per cent. of iron, is considerably less in the lungs of children which have not breathed than in the lungs of children born alive; (2) the difference is especially evident in comparing in each individual case the amount of iron with the amount of solids; (3) even in the comparison of the averages, the difference is very perceptible; (4) the amount of iron in the lung-tissue increases with the age of the fœtus or the child; (5) diseased conditions of the lungs have no marked influence on the amount of iron; (6) the imbibition of the pulmonary tissues with blood appears to be without influence of this test; (7) this test has never been found to be contradictory to other tests or to known facts; (8) the amount of iron in the lungs is invariably dependent upon respiration, and increases in direct proportion to the activity of the function of the lungs. From a theoretical point of view, the following objections may be made to this method:—First: The process requires a special education, and the facility for making a chemical analysis. This objection may be met, however, by the fact that all the physician requires to do is to ligate the roots of the lungs when they may be subjected to the hydrostatic test, and then submit them them to the chemist for analysis. Second: The difference in the amounts of iron is so small that an error may be readily introduced; in this connection, however, it is only necessary to remember that the analysis must be made by a practiced chemist, and that the differences are too great to fall within the probable error. Third: The amount of iron may vary in different individuals, since the amount of iron in the liver and spleen are subject to sudden variations. This objection may be met by the fact that the liver and spleen are blood-making organs, and therefore the percentage of iron in them must be subjected to variation. This is not, however, the case with the lungs. Finally, it must be admitted that further investigations are required before it can be positively stated that various pathological conditions, either of the mother and fœtus or the child, will have an influence on the amount of iron in the lungs, such as anæmia, leucocythæmia, or morbus Werlhofi, where the iron is diminished, or diabetes, where it is increased; while it must not be overlooked that, through neglect in ligating the umbilical cord, there may be serious bleeding, which will diminish the amount of blood, and, as a consequence, the amount of iron found in the lungs. The author finally claims that this method is applicable to the examination of lungs which are already in a state of putrefaction, where, of course, other tests cannot be applied, and where artificial respiration has been employed. In the latter case, however, it must be determined whether artificial respiration has only led to the introduction of air into the alveoli, and not to the introduction of blood into the pulmonary capillaries. In addition, we may mention that Dr. Nikitin claims that if the stomach and intestine of the new-born child contained sufficient air to cause them to float on water, and if the artificial injection of air can be excluded, there is strong probability that the child was born living.

162. *McPhedran on Multiple Neuritis from Arsenical Poisoning.*—The patient, a man, aged 58, came under treatment for a tumour behind the ramus of the jaw, on the left side. It grew rapidly, and, after a month's time, attained the size of a hen's egg. A cancer doctor was consulted by the patient, who applied a plaster, leaving it on for two days, and then a poultice for two more, and so on for two weeks. These applications were very painful. Before two weeks of this treatment was ended the patient found his legs becoming stiff and numb, with painful sensations shooting through them. In a few days he was unable to walk. He was admitted into the Toronto General Hospital in the following condition:—The legs were almost completely paralysed, the muscles being wasted and soft. There was great complaint of pain in the legs and feet, requiring an opiate to procure sleep at night. Anesthesia was very marked in the limbs, but they were acutely sensitive to painful impressions, as *e.g.*, drawing the finger along the sole of the foot, or pinching the muscles of the calf. Cold was easily felt, but heat was not appreciated except when great, and then gave the sensation of cold. Knee-jerk and other muscle reflexes were absent, as well as superficial reflexes. With the eyes closed he was not conscious of the position of his legs. To the faradic current there was no response in the feet or legs, and only a weak contraction in the thighs; no use also in the forearms and hands. There was no wasting of forearms and hands, but much anesthesia and weakness, with some incoordination. He could not pick up small objects without looking to see if he had hold of them. The skin everywhere was dry, and showed a tendency to degenerate; the soles of the feet were scaling freely. He said he had had no rash. The legs were deeply pigmented. No bladder or bowel symptoms Appetite and general nutrition fair. On the left side of the neck, below the ear, was a circular slough one and a half inches in diameter, beginning to separate. The treatment was half a drachm of pot. iodide daily, and salines for the bowels. In about two months' time he was able to walk a little. and there was a general improvement in the muscles of the leg. The anesthesia of the hands persisted, while the reflexes were still absent. The author concludes the notes of this interesting case by referring to the differential diagnosis of cases of multiple peripheral neuritis. H. Percy Dunn.

163. *Bokai on an Antidote for Morphine.*—The author recommends picrotoxin as an antidote for morphine, on the ground that it exerts an antagonistic action to morphine on the respiratory centres; also that it is a powerful stimulant to the vaso-motor centre, and in this respect likewise an antagonistic to morphine; further, that the action of morphine on the cerebrum is directly opposed to that exerted by picrotoxin, and, finally, Professor Bokai suggests that the previous administration of a small dose of picrotoxin might reduce the danger of asphyxia in chloroform narcosis.

164. *Liabilities for Injurious Patent Medicines.*—The Supreme Court of Georgia has just rendered a decision which is likely to attract wide-spread attention and have a salutary effect on the preparation of patent medicines. It holds that the proprietor of such a preparation is liable in damages for injury done to any person who takes the medicine according to the directions. This liability does not fall upon the druggist who sells the medicine, but it attaches to the proprietor, even when the consumer buys not from him directly but from the druggist. The view the court takes of the matter is as follows:—"Proprietary or patent medicines are secret, or intended by the proprietors to be secret, as to their contents. They expect to derive a profit from such secrecy. They are, therefore, liable for all injuries sustained by any one who takes their medicine in such quantities as may be prescribed by them. There is no way for a person who uses the medicine to ascertain what its contents are ordinarily, and in this case the contents were only ascertained after an analysis made by a chemist, which would be very inconvenient and expensive to the public. Nor would it be the duty of a person using the medicine to ascertain what poisonous drugs it may contain. He has a right to rely upon the statement of the proprietor, printed and published to the world; and if, thus relying, he takes the medicine and is injured on account of some concealed drug of which he is unaware, the proprietor is not free from fault, and is liable for the injury thereby sustained." In rendering this opinion, the court said that it could find no American case in which the precise question had been decided before.

Laryngology and Otology.

RECENT PAPERS.

165. Cayla, Dr.—On a Laryngeal Complication of Urticaria. (*Annales de Derm. et de Lyph.*, vol. x., No. 12.)

166. Burnett, Dr. C. H.—On a Case of Aural Vertigo Entirely and Permanently Relieved by Excision of the Membrana Tympani and the Malleus. (*Amer. Journ. of the Med. Sciences*, Feb., 1890.)

167. Biggs, Dr. H. M. — Injury of Larynx from Electric Light Wire (*New York Med. Rec.*, Jan. 25, 1890.)

168. Lœwenberg, Dr.—On the Aural Complications of the Present Epidemic of Influenza. (*Bulletin Medical*, Jan. 8, 1890.)

169. Rohrer, Dr.—On a Case of Rhinolithe. (Reprint from the *Weiner klin. Wochensch.*, 1890, No. 2.)

170. Rohrer, Dr.—On Ptyolithe in Wharton's Duct. (*Ibid.*)

171. Karlomann, Dr. Arthur.—On cases of Empyema of the Antrum of Highmore. (Reprint from the *Deutsche Med. Wochensch.* 1889, No. 50.)

172. Braun, Dr. Adolf.—On Some Affections of the Bursa Pharyngea. (*Lancet*, Jan. 11, 1890.)

173. Johnston, Dr.—On the Use of Papaïn in Ear Diseases. (*Edin. Med. Jour.*, January, 1890, p. 621.)

Art. 165. *Cayla on a Laryngeal Complication of Urticaria.*—The author observed in a man affected with urticaria intense laryngeal troubles which for several days rendered asphyxia imminent. The laryngeal troubles improved and were succeeded by painful gastric disturbances, the patient vomiting five or six times a day. He finally recovered.

166. *Burnett on a Case of Aural Vertigo Entirely and Permanently Relieved by Excision of the Membrana Tympani and the Malleus.*—Miss A. V. D., aged thirty-one, first consulted the author regarding deafness in her left ear, in November, 1881. She had suffered in childhood from earache and suppuration in the now deaf ear. Gradually the hearing had failed in this ear until it interfered with her avocation of trained nurse. Latterly there had been persistent, loud, high-pitched, and distracting tinnitus in her left ear, with a sensation of confusion in the head. She felt depressed and could not do her work. Hearing in the affected ear was six inches for isolated words. The tuning-fork vibrating on the vertex was heard best in the affected ear. The membrana tympani of the left ear was white, thick, and flattened, but there were no visible cicatrices on it. The pharynx and nares showed symptoms of hypertrophic catarrh. The left tympanic cavity was inflatable by various methods. Treatment of the naso-pharynx relieved the catarrhal symptoms of those parts, but deafness and tinnitus remained unaffected by the treatment, which was conducted for two months. He did not see the patient again until May, 1888, when he found that her general health had improved during the last two years, since she had abandoned nursing. An examination of the left ear showed that the membrana tympani was white, retracted, and adherent to the inner wall of the drum-cavity, but movable under the pneumatic speculum except in the line of the malleus. The hearing was the same as six years before. The tinnitus was constant and distracting, and there was a permanent sensation of pressure in the ear, and attacks of ear vertigo had been increasing in frequency and intensity for a year. At times the latter were so severe as to oblige the patient to hold on to a lamp-post for support when a vertiginous attack occurred in the street. Convinced that the tinnitus, the sense of aural pressure, and the attacks of vertigo were due to an inward pressure exerted by the retracted membrana tympani and the chain of ossicles upon the labyrinth-fluid, and hence upon the nerves in the internal ear, he suggested the excision of the retracted and adherent membrana and malleus as the only means of permanently relieving the abnormal labyrinthine pressure and the disagreeable symptoms caused by it. The circular incision was begun close up to the neck of the malleus in the initial incision, severing the suspensory ligament and the posterior fold of the drum-membrane, sweeping then around the periphery to the opposite side of the malleus, cutting through the anterior fold and ligament, up to the neck of the malleus. The malleus and the membrana tympani still attached to it were then removed by means of delicate and slender forceps. Inspection revealed a strip of bone, thread-like, 3 mm. long, running from the lower end of the manubrium

inward toward the promontory, and which had evidently bound the malleus to the inner tympanic wall, and explained the adhesion which had been diagnosed before the operation. The hœmorrhage, which was slight, was easily controlled by the five per cent. solution of cocaine muriate already named. As soon as the patient recovered from the etherization, she stated that the tinnitus was very much less and that the sensation of fulness and pressure in her ear had greatly diminished. She remained in bed twenty-four hours; on the third day she went out walking. The tinnitus was now barely audible, and its note had become much lower in the musical scale. There was no sense of fulness in the ear, nor was there any tendency to aural vertigo. There was no inflammatory reaction in the ear, nor was there any bleeding. The hearing was unaltered. A tampon of cotton impregnated with iodoform was worn *lightly* in the auditory canal. The patient remained under immediate observation one week, during which time she expressed herself as feeling the greatest relief in her ear. There was no discharge of any kind from the ear. He heard from the patient from time to time, and in September, 1888, he examined the ear once more, and found that a new membrane had formed, and there was no return of tinnitus, fulness in the ear, nor of the attacks of vertigo. In September, 1889, he again examined the ear, and found that the new membrana was still intact, and that it moved easily inward and outward under the alternate condensation and refractation of the pneumatic speculum. There has been no return of tinnitus, nor of vertigo, and the past year has been one of uninterrupted health and comfort in the ear. The hearing remains unaltered.

167. *Biggs, on a Case of Injury of Larynx from Electric Light Wire.*—The author describes the fatal lesions caused to a line man who had been killed by electricity while repairing some wires on a telegraph pole. One of the wires had come in contact with the face, and, sliding down to the mouth, had cut into the cheeks. The other had opened the larynx, cutting through the thyroid cartilage and the upper portion of the cricoid, and producing almost complete occlusion of the larynx. At the *post-mortem*, as usual in these cases, the blood was found to be dark and fluid, no clots being found anywhere in the body. Minute hæmorrhages were found under the surface of the various serous membranes, and, in addition, there was general congestion of the viscera.

H. Percy Dunn.

168. *Lœwenberg on the Aural Complications of the Present Epidemic of Influenza.*—Dr. B. Lœwenberg, of Paris, in a short article in the *Bulletin Medical,* of Jan. 8, 1890 gives an account of his observations on this subject. From Dec. 23, 1889 to the above date he observed 20 cases—nine old cases, in which influenza had lighted up old ear disease afresh, or added a new form, and eleven new cases. Almost all the latter presented the usual classical symptoms of acute inflammation of the tympanum, intense pain, ceasing on the occurrence of perforation, with purulent discharge and almost complete deafness. A small number, however, only had slight catarrhal trouble of the eustachian tubes and drum cavities. The chief characteristic of the acute cases were the ease and rapidity with which they were cured. The author quotes figures from his own practice to show that influenza is attended by a large proportion of cases of acute olitis media, and though the cases he has seen have been remarkably benign in character, he argues against the occurrence of serious complications, and insists on the importance of early treatment of the ear.

E. Cresswell Baber, M.B.

169. *Rohrer on a Case of Rhinolithe.*—In the case recorded by Dr. Rohrer there were ozœnatous crusts in both nasual cavities, and in the left a fine, irregularly-shaped stone filling the lower and middle meatuses. With difficulty it was removed with forceps and hook. It was found to have produced a deep depression towards the upper maxilla. The stone weighed when dry 2·2 grammes; its length, including processes, nearly 3 cm., without processes, 2 cm. [There is no mention of any nucleus.—*Rep.*]

170. *Rohrer on Ptyolithe in Wharton's Duct.*—This salivary calculus, which produced the usual symptoms of a ranula-like swelling on the floor of the mouth, was of the size of a hazle nut. It weighed ·63 grammes, and was 1·5 cm. long, 1 cm. wide, and 7 cm. thick. It was removed by incision.

171. *Kalomann on Empyema of the Antrum.*—Dr. Arthur Kalomann relates the case of a man, aged 32, suffering from hemorrhage from the nose and fœtid discharge. This originated after some difficulty had been experienced in stopping the right second upper molar. After extraction of this tooth fœtid pus was syringed out from his nose, and two syringings on the following days were only required to accomplish, as the author considers, a complete cure. (!) The author advocates washing out the antrum through the nose before it is opened through the alveolar process. He relates, briefly, two cases of nasal polypi in which syringing in this precise manner for a few times was successful. On the other hand, he admits that even syringing through the alveolar process may not effect a cure, and refers to a case in which he removed with the cold snare from the posterior-wall of the antrum a growth the size of a hazle nut, which was presumably the cause of the suppuration.

172. *Braun on Affections of the Pharyngeal Bursa.*—Dr. Braun recommends a curette of the same form as Hurtmann's, but smaller, for the removal of the pharyngeal bursa under guidance of the rhinoscopic mirror. He prefers Volklini's mode to a self-retaining arc; but considering that the latter dispenses with an assistant, and when used in White's form, can be perfectly easily applied and removed, it has, it appears to us, a distinct advantage.

E. Cresswell Baber, M.B.

173. *Johnston on the Use of Papaïn in Ear Diseases.*—Dr. Johnston records his experience of the use of papaïn in diseases of the ear. In chronic suppuration of the middle ear it is most valuable in helping to cleanse the masses of debris, etc, which cannot be got away by simple syringing. The plan adopted by the author in these cases is, to drop about 15 minims of a 5 per cent. solution of papaïn into the ear. This is allowed to remain in the ear for one hour, then it should be syringed out with boracic acid lotion and carefully dried. It has also proved very useful, where a firm plug of wax and epithelium has caked together. A few drops of the papaïn solution speedily facilitates the removal of the wax as soon as the syringe is used. Papaïn has been shown to be a digestive ferment, resembling in some degree both pepsin and pancreatin. It will act in solutions of great concentrations, in acid, alkaline, or neutral media. It is soluble in water and glycerine, and it is best used combined with a little carbonate of soda. in the proportion of 5 grains of soda to half an ounce of papaïn solution.

Richard Neale, M.D.

Epidemiology.

RECENT PAPERS.

174. **Olavide**, Dr. — On Leprosy in Spain. (*Annales de Derm. et de Syph.*, vol. x., No. 12.)

Art. 174. *Olavide on Leprosy in Spain.*—The author states that he has never seen hospital lepers transmit leprosy to their neighbours or to the medical attendants, nor has he known leprous husbands contaminate their wives. He has never observed cases which favoured the doctrine of infection. He admits, however, as proved beyond doubt, that it is a parasitic affection, and that it is contagious and inoculable in certain countries (Cuba, Canaries, etc.), but not in Spain. Leprosy is conveyed to Spain from its colonies. The disease is chiefly observable in the provinces bordering on the sea, and these centres of leprosy are most numerous in places a few leagues from the shore. Notwithstanding official orders, statistics regarding leprosy do not exist in Spain. Olavide, however, believes that the number of lepers does not exceed 1,000 to 1,500.

Ophthalmology.

RECENT PAPERS.

175. **Bowker**, Dr. **John** C.—A case of Traumatic Iridodialysis (*New York Med. Rec.*, January 25, 1890.)

576. **Snell**, Mr.—On Retinal Hœmorrhages. (*Brit. Med. Jour.*, Feb. 1, 1890.)

Art. 175. *Bowker on a Case of Traumatic Iridodialysis.*—The patient, a lad 8 years old, was playing with comrades when he felt his left eye struck with something, followed by a sharp pain. Two days afterwards, a medical man having seen him immediately after the accident, the father noticed a leaden bullet, weighing eight grains and a half, packed away between the ocular and palpebral conjunctiva, at the external canthus. The foreign body was removed. When the author saw the patient there were slight conjunctivitis, ciliary injection and photophobia, together with a rent in the iris, covering, probably, five or six square millimetres, through which the red reflex was visible. The rupture was at the inferior external quadrant, and about two millimetres of the ragged edge of the iris remained along the ciliary margin. The contraction of the iris threw the normal pupil into an irregular oval shape. Vision was 0·6, but through the artificial pupil light was alone distinguishable. The cornea was entirely uninjured, and no abrasion could be detected even with a high power lens. Under treatment the troublesome symptoms subsided. The fundus is normal, and the lad suffers scarcely any inconvenience, save from the disfigurement, which is slight.

176. *Snell on a Case of Diffused Hœmorrhages in the Right Retina.*—At a meeting of the Sheffield Medico-Chirurgical Society, the author shewed a man, aged 57, who had been under observation for several months on account of diffused hœmorrhages in the right retina. Recently a number of purpuric spots had appeared on the extensor aspects of the forearms, particularly the left. The mucous membranes were slightly paler than natural; the gums were not spongy; the urine was slightly albuminous, and there was hypertrophy of the left ventricle. The author remarked upon the association of the purpuric spots with hemorrhages in the retina, and said that, although the patient was undoubtedly the subject of kidney disease, there had never been present in the retina any of the white patches characteristic of albuminuric retinitis, and, moreover, the appearances were confined to the right eye.

H. Percy Dunn.

Syphilography.

RECENT PAPERS.

177. **Hochsinger**, Dr. — The Fate of Congenitally Syphilitic Children. (*Brit. Journ. of Dermatol.*, February, 1890.)

Art. 177. *Hochsinger on the Congenitally Syphilitic Children.*—Dr. Hochsinger, Physician in Ordinary to the Children's Hospital in Vienna, under the direction of Dr. Hassowitz, has made use of the plentiful material which this institution affords in order to throw some light upon the question of the fate of congenitally syphilitic children. The results of his investigations, which he records in the *Allez Wiener Med. Zeitung*, Nos. 45-48, are drawn from 265 accurately-observed cases, and 63 of these, the observation of which extended over a period of four-and-twenty years, can be taken as trustworthy evidence. The treatment, as far as it was directed against syphilis, consists of giving proto-iodide of mercury internally, the effect of which has highly satisfied its author. From his tables it appears that esanthemata only make their appearance up to the age of four years, and the later manifestations belong to the tertiary form. The course of hereditary syphilis is generally much more favourable than it is usually described in medical text-books. The author draws a noteworthy inference with regard to that trio of symptoms, as Hutchinson calls them, which is composed of the well-known malformations of the teeth, the parenchymatous keratitis, and deafness, and which is supposed to be especially characteristic of hereditary syphilis. In analysing the 63 cases observed, from four to twenty years, Hochsinger found these symptoms rather among strumous and rickety children, who were free from syphilis. Consequently, he denies that Hutchinson's trio has any value for the diagnosis of congenital syphilis. Further, Hochsinger objects to the exaggerated prognosis of congenital syphilis given by syphilis specialists. He believes that the most difficult cases are curable with suitable treatment, and particularly when it is applied early. For example, pepmhigus syphiliticus neonatorum was cured thus in 20 out of 23 cases. Moreover, the further life histories of the individuals are not difficult to control. With reference to the question of the connection between congenital syphilis and rachitis, regarded from Hassowitz's point of view, Hochsinger points out by a number of facts which he has got together that his manner of looking at it is the only correct one—namely, that most children suffering from congenital syphilis become rachitic, because they have suffered a considerable disturbance of their nutrition on account of the syphilis with which they were affected, which disturbance of nourishment, not more nor less than any other kind of nutritive disturbance, disposes to rachitis. No other connection exists between the two conditions. Hochsinger did not find among his material any cases which would have proved the intimate connexion between hereditary syphilis and struma, which has been asserted to exist by many authors.

Bacteriology.

RECENT PAPERS.

178. VAITLARD, Dr.—On the Transmission of Typhoid Fever. (*Revue Scientifique*, 25 Jan. 1890.)

179 PENZOLDT, PROF. (Erlangen).—On the Anti-bacterial action of some Aniline Colouring Matters. (*Archiv. für. exp. Path. Med. Pharm*).

ART. 178. *Vaitlard on the Transmission of Typhoid Fever.*—In a commnnication read before the *Société Médicale des Hôpitaux*, the author states that in the course of five consecutive epidemics of typhoid fever occurring among soldiers, he had been able to demonstrate the presence of the typhoid bacillus in the water supplied to the troops attacked, and in some instances the source of the bacillus could be traced back to its origin. Quite recently, the distribution of Seine water in certain arrondissements at Paris was clearly the cause of an outbreak of fever. The most enthusiastic believers in the water-transmission of typhoid fever go so far as to deny that any other mode of conveying the specific germs obtains; but in many instances, just as with cholera, it has appeared impossible to gainsay the fact of the air having been the medium. Necessarily, however, conclusive proof of such a contention must be difficult to procure, for typical examples of ærial transmission are rare. Special importance, therefore, attaches to some observations recently made *apropos* of an epidemic fever among Russian soldiers, in which the air seems to have been the vehicle of the contagion. An epidemic broke out among the troops stationed at Zitomir, and it was noticed that, although they all derived their drinking water from the same source, the men stationed at the various barracks suffered in very different degrees, the mortality varying from 11 to 33 per thousand. A bacteriological examination of the dust obtained from the infected rooms proved to be extraordinarily rich in bacilli, among which the typhoid bacillus could be identified. The barracks were therefore evacuated and thoroughly disinfected and cleansed, with the result that, in the course of a few months, the epidemic practically ceased. This is not the first time that the typhoid bacillus has been discovered in such a *milieu*, and in future the possibility of dust being a means of transmitting diseases ought not to be overlooked, and this holds good for tuberculosis, pneumonia and diphtheria, as well as typhoid fever. In the course of his investigations, M. Vaitlard made some highly instructive observations, which may enable us to form an idea how maladies apparently infectious and with a tendency to develop spontaneously in persons presenting certain predispositions, finish by becoming contagious, and capable of attacking even those who are least predisposed to the disease; and his observations bore on the identity of Eberth-Gaffki's bacillus, the virulent microbe of typhoid fever, with the ***bacillus coli communis***, an inoffensive and normal inhabitant of the intestines. He has almost succeeded in demonstrating that, if brought up in a medium ill-adapted for its nutrition, the former gradually assumes the character of the non-virulent bacillus. It only remains to be shown, by reversing the process, that the latter can be endowed with the virulency of the Eberth-Gaffki bacillus to establish their identity, thus throwing light upon the well-known effect of fatigue, overwork, grief, etc., on the spontaneous development of the typhoid bacillus, and explaining the revivification of attenuated pathogenic microbes generally.

ALFRED S. GUBB.

179. *Penzoldt on the Anti-bacterial Action of Some Aniline Colouring Matters.*—The experiments for this paper were made by Dr. A. Beckh, of Nuremberg. The following substances were examined:—Malachite green, fuchsin, Hofmann's violet, methyl-violet, phenyl-blue, corallin, eosin, Bengal-rose, methyl-orange, vesuvin, tropäolin, scarlet-red, congo-red, indulin, and methylene-blue. (The chemical formulæ are here omitted, *Rep.*) The bacteria selected were the staphylococcus pyogenes aurens, and the autrax bacillus. Threads were used as in Kock's method, and they were usually allowed to remain only one minute in the fluid, and then one minute in distilled water, before being placed upon nutrient gelatine. Saturated solutions of either of these three: methyl-violet, malachite green, and Bengal-rose, arrested the development of staphylococcus pyogenes; trimsthyl-rosaniline, phenyl-blue, and methylene-blue delayed the same. Methyl-violet, malachite-green, or methylene blue, added to nutrient gelatine in the proportion of 0·07 up to 0·13 per cent., prevented entirely the growth of the above. Four of the dyes in concentrated solutions, acting for one minute, prevented the development of autrax-bacilli, viz., methyl-violet, malachite-green, trimsthyl-rosaniline, and phenyl-blue. An attempt was made to ascertain the degree of poisonous action of the dyes upon the tissues. Their degrees of solubility varying very much (Bengal-rose 10 per cent., trimsthyl-rosaniline only 0·2 per cent.) the dose per kilogramme of body-weight injected into animals was chosen in relation to the concentration of the effective anti-bacterial dilution as already ascertained. Methyl-violet (0·05 per. kilo.) caused only local alterations, viz., extensive gangrene of the skin; malachite-green (0·1 p. kilo.) caused motor paralysis and cramps, fatal on the ninth day; trimsthyl-rosaniline (0·02 p. kilo.) caused similar symptoms; Bengal-rose (0·25 p. kilo.), phenyl-blue (0·1 p. kilo.), and methylene-blue (0·075 p. kilo.) caused no special symptoms. The author frankly admits that it does not seem very probable that these substances can be used in surgery for aseptic purposes. But a number of cases of diphtheria were treated locally with methyl-violet and malachite-green solutions in doses known to be innocuous to the human body, and with the avoidance of bleeding in application. No bad consequences ever resulted, but, on the other hand, no evident benefit ensued. Contrary to expectation, the diptherotic membranes were less stained than the healthy mucous membrane.

E. J. EDWARDES, M.D.

Diseases of Children.

RECENT PAPERS.

180. SHARP, JOSEPH, M.D.—On a Simple Plan of Treatment for Bow-Leg and Knock-Knees. (*Kansas City Medical Record.* Dec., 1889.)

ART. 180. *Sharp on a Simple Plan of Treatment for Bow-Leg and Knock-Knees.*—In a paper read before the Jackson County Medical Society (U.S.A.) Dr. J. Sharp describes a simple method of treating the above deformities in children, from which he has had excellent results. The only apparatus he uses are strips of rubber adhesive plaster, and absorbent cotton or wool. These are applied in the following manner, only at night, the child being allowed to exercise at will during the day:—In bow-legs, after having been prepared for bed, and any bathing, rubbing, and manipulation made a part of the treatment gone through with, the child is placed on its back, the feet brought accurately together, with a pad of absorbent cotton to relieve pressure on the malleoli, a strip of adhesive is passed under the heels, so that ends are about of equal length on each side, and long enough to reach around over the instep across the other foot, passing entirely around the feet, thus securely fastening them together, then the knees are brought together with a pad of cotton between the condyles, if necessary, and secured by adhesive twice around. In knock-knee a pad of antiseptic wool, covered, and with broad tapes attached, is nightly placed between the condyles, while the feet are secured together by a pair of shoes fastened together at the heels, the toes pointing outward at about 30° from a line perpendicular to the median line of the body. The author, at the same time, prescribes tonics and alteratives, and attends to the diet in the usual orthodox manner.

GEORGE BROWN.

Reviews.

ARTICLE 181.

Developpement des éléments du Système nerveux Cérébro-spinal. By Dr. W. VIGNAL. Paris: G. Masson. 1889.

THIS monograph deals with the development of certain of the elements of the cerebro-spinal nervous system, and will doubtless be read with interest by all embryologists. As regards the peripheral nerves, the author believes that they develop from the centre to the periphery, under the form of bundles of fine fibres, and of granulations arranged one after the other, nucleated in the interior of a homogeneous substance. The periphery of these bundles of fibres is covered by embryonic connective cells. Later, by proliferation, these cells penetrate into the interior of the nervous bundles, multiply there, divide the fibres into little bundles, and cover them; at the same time they differentiate themselves from the ordinary connective cells by the great length which their longitudinal diameter assumes in relation to the transverse. These cells form envelopes for the bundles, thus forming in its essential parts the nerve fibre, for the bundle of fibres surrounded by protoplasm, which itself is covered by an envelope, is the axis cylinder. The myeline makes its appearance later, about the fourth month, in the protoplasm surrounding the axis cylinder, being at first scarcely differentiated from it. It appears generally under the form of a thin layer which extends throughout the whole or nearly the whole of the interannular segment. At other times, it appears under the form of globules distributed very irregularly along the fibre, or under that of granules isolated one from the other. From this time it develops more and more until the spinal nervous fibres have attained to the adult condition. But parallel with the development of the myelin in the spinal nervous fibre there takes place a development of protoplasm which often occupies a more considerable space than the former. In all cases it exists in much greater quantities than in the adult. For a further account of the development of the fibres and other elements of the nervous system we must refer readers to the book itself. We should not omit to say that it is illustrated by a number of excellent plates, and that it is unprovided with an index.

BERTRAM C. A. WINDLE, M.A.. M.D.

ARTICLE 182.

The Physician as Naturalist. Addresses and Memoirs bearing on the History and Progress of Medicine, chiefly during the last hundred years. W. T. GARDNER, M.D. Glasgow: Maclehose & Sons.

ESSAYS, dealing with the historical side of questions, lend themselves to reproduction after the lapse of a quarter of a century, with less loss of interest than do the majority of essays upon topical subjects. This collection, which deals with such subjects in a semi-popular manner, is well worth reading. With regard to venesection, there is much that is interesting as to the very strong views which Cullen, Gregory, and others held as to the necessity for it in all severe illnesses. This treatment was supposed to be founded upon Hippocratic tradition, yet our author draws attention to the fact that only once in the genuine Hippocratic writings is the necessity for free blood-letting set out in any detail. The most valuable paper in the series was read before the Medical-Chirurgical Society of Glasgow in 1864. It was one of the earliest and most successful protests against the over-stimulation, which was in vogue at that time, of fever patients with alchohol. Dr. Gardner compared the results of 595 cases of typhus fever under his care, which had been treated almost entirely without alcohol, with a mortality of 10 per cent., with cases treated previously in the hospital with a moderate amount of stimulant and a mortality of 17½ per cent.; and with the cases of Dr. Todd, who often prescribed half a pint of brandy in the day for even young patients, and lost 25 per cent. The mortality of the young patients under Dr. Gardner's care was practically *nil*, yet Dr. Todd lost 17 per cent. of such cases. This paper was reprinted in the *Lancet* at the time and did much to convince the medical profession that milk was far more essential than alcohol for such patients.

ARTICLE 183.

Clinical Lectures on Diseases of the Nervous System. By PROFESSOR CHARCOT, vol. iii. (New Sydenham Society). 1889.

THE Society has done well to present to English readers, another series of Professor Charcot's charmingly graphic clinical lectures. This volume deals almost entirely with hysteria in its many protean forms. The volume also deals with various forms of muscular atrophy. Practitioners referring to this volume will find many valuable practical hints which will enable them to decide when hysteria is at the root of the patient's illness. Simulated catalepsy, for example, can be distinguished from that due to hysteria. In the former the pulse and respiration become laboured and quickened, but not so in the latter. A careful examination of hysterical patients will, as is well-known, reveal areas of anaesthesia; and

Charcot has shown that the distribution is pathognomonic; and moreover that an identical distribution can be produced in hysterical patients by suggestion and hypnotism. Hemianaesthesia is one of the most common forms; but when a patient is unable to move a joint, it will often be found that the affected area is sharply bounded by lines running tranversely round the limb. The same condition can be reproduced by means of hypnotism. Much may be learnt by the discovery of a limited field of vision, by a history of convulsive seizures, or of aphonia. Several remarkable, but undoubted, cases of hysteria in men are detailed at length and discussed. Cases, of what is called by some English authors "railway spine," are looked upon by Charcot as hysterical. The lecture upon muscular atrophies secondary to joint lesions is a very instructive one. Acute and chronic rheumatism, gout and gonorrhœal arthritis may all be followed by muscular atrophy, even when the joint lesion is very slight. The extensors of the joints are the ones which are usually affected; with the shoulder the deltoid; with the elbow, the triceps, with the hip, the gluteous maximus; with the knee, the quadriceps. It is to be hoped that other lectures by Professor Charcot may be published by the society during the next few years.

ARTICLE 184.

Die Krankhaften Storungen, Von Dr. EDWIN KLEBS. Being the second volume of Die Allgemeine Pathologie. Fischer, Jena, 1889.

THIS volume deals with the various forms of degeneration and infiltration; then with the atrophies, and finally with the hypertrophies and new growths. Full references to the current literature are given at the end of each chapter. The illustrations, which are printed in colour, are exceptionally good, are far superior to any which have appeared in English works. The book is full of new and original researches; for example, thrombosis, which the author describes as a form of albuminous degeneration, is divided up into: 1. Fibrin-thrombosis; 2. Globulin-Thrombosis; 3. Leucocyte-Thrombosis; 4. Red Corpuscle Thrombosis; 5. Mixed Thrombosis, which occur under different conditions, and present characteristic microscopical features. The various changes which occur in bone atrophies, due to rickets, cretinism, osteomalacia, congenital bone-fragility, are well described; but those due to congenital syphilis are omitted. The author considers lupus a variety of tubercular growth. The large amount of new connective-tissue formation with spindle-cells, and the absence of early causeation, are the chief distinctive features. The work concludes with a fairly complete summary of our knowledge of malignant growths, and of teratomata.

ARTICLE 185.

Synopsis of Human Anatomy, being a complete compendium of Anatomy, including the Anatomy of the Viscera, and Numerous Tables. By JAMES H. YOUNG, M.D., Philadelphia and London. F. A. Davies, 1889.

THE object of this book is, as its title indicates, to furnish a concise, though complete synopsis of human anatomy for the use of students of medicine and others. The various chapters are devoted to osteology, articulation and ligaments, the muscular system, the heart and vascular system, the alimentary apparatus, vocal and respiratory apparatus, the genito-urinary apparatus, the nervous system, organs of special sense, and surgical anatomy respectively. The descriptions of all these subjects are well done, and are arranged in such a manner as to facilitate the labour of the student in learning them. The book is of handy size, and excellently adapted for its purpose. The chart of the cranial nerves at the end is an extremely useful one for showing at a glance the whole of the details in connection with their origin, divisions and distribution. The book should become very popular among those for whom it is most specially intended.

ARTICLE 186.

The Intestinal Diseases of Infancy and Childhood; Physiology, Hygiene, Pathology, and Therapeutics. By A. JACOBI, M.D., Detroit, Mich.: George S. Davis, 1887.

OF all the fatal affections, says the author, that occur in the first year of life, forty per cent., are diseases of the digestive, and twenty per cent. diseases of the respiratory organs. This may be taken as the text upon which the author has founded his book. It is plain that he came to the conclusion that so high a mortality as 40 per cent. in early life, could only obtain under conditions which, for the most, part were preventable. Most of the preventable causes belong to faulty hygiene and faulty methods of feeding. His pages point out how these two pitfalls are to be avoided. Useful remarks occur upon the changes that breast-milk undergoes, on wet nurses, substitutes for breast-milk, on the nourishment during the period succeeding infancy, dentition, gastric digestion, intestines, etc. With reference to the aphorism of "one child, one cow," he holds that the *mixed* milk of a whole dairy is preferable to the milk of one cow; he also asserts that cow's milk must be boiled before being used in the nursery. Condensed milk, he remarks, is not a uniform article, and should not be employed in the feeding of babies, when fair and unadulterated milk can be obtained. As to other milk, he is of opinion that the best substitutes for woman's milk within reach are the milks of mares or asses. Upon the question of adding water to cow's milk for babies, he thinks infants' ought to be quite fluid—most infants and children, both well and sick, are supplied with too little water. His views upon the question of adding sugar to cows' milk are, that the sugar required as an admixture to infant foods must be cane and not milk sugar. The latter increases to an undue extent the amount of lactic acid, and thereby removes alkalies and produces dyspepsia and diarrhœa. Speaking of gum arabic and gelatine, he says, gum is not only a dilutent, but also a nutrient under the influence of hydrochloric acid. The same is true of gelatine; thus, in acute and debilitating diseases which furnish no hydrochloric acid, this must be provided for artificially The latter portion of the book is devoted to the account of, and the causes, symptoms, and treatment of, the various gastric and intestinal disorders incidental to infancy and children, a careful perusal of which will repay the practitioner. Many useful hints are given for the management of these cases, the great majority of which often present intractable features. We heartily commend Dr. Jacobi's volume to all practitioners, as being a useful and practical guide upon the subject of which it treats.

ARTICLE 187.

On Local Asphyxia and Symmetrical Gangrene of the Extremities. By MAURICE RAYNAUD. (Translated for the New Sydenham Society, by Thomas Barlow, M.D.)

IN noticing the New Sydenham Society's translation of M. Raynaud's original theses, one is confronted by the fact that one is dealing with what, in these stirring times of ours, may be almost called "ancient history." With our present more extensive knowledge of the functions of the nervous system, and of the distribution of the vasso motor nerves, we are scarcely able to appreciate sufficiently the value of Raynaud's observations about the conditions which he somewhat strangely called local asphyxia and symmetrical gangrene. We are, however, much indebted to the New Sydenham Society and to Dr. Barlow for having brought together the several papers which lead us step by step to a knowledge of the affections which are now known as "Raynaud's Disease." The translated papers are as follows:—First of all, Raynaud's original thesis, published in 1862, and secondly, an extension of his researches, published in the *Archives Générales de Médecine*, 1874. To this is added in the present work an appendix, in which will be found a collection of references to the subject in medical literature. It may be worth while to mention the parts of the original thesis. It is introduced by an account of spontaneous gangrene, as to the production of which no satisfactory explanation had been given. The three forms, viz., *local syncope, local asphyxia, and spontaneous symmetrical gangrene*, are those illustrated by a number (25) of highly interesting and complete cases, and are shown to be degrees of the same condition. Thus, *local syncope*—a temporary deprivation of arterial blood; *local asphyxia*—a temporary deprivation of arterial blood and starts in the venules of the part; *spontaneous gangrene*—a prolonged action of the conditions at work in local asphyxia. As regards the cause of these phenomena, after carefully examining many possible explanations, M. Raynaud concludes, that the condition is due to local capillary spasm. In the second communication of the author (1872), he supports his former hypothesis by showing (1) that these actually occur in the really spontaneous vascular spasm, inappreciable in the great vessels, but very obvious in the arteries upon all calibre, is in the retinal vessels; and (2) that it is possible to modify the asphyxial state of the extremities by action from a distance, and especially by acting upon the cord. As the latter was shown to be the case, treatment by the continuous current was found to be of use.

As a further step in his hypothesis, M. Raynaud came to the conclusion that local asphyxia of the extremities is essentially a neurosy, characterised by increased irritability of the central parts of the cord presiding over vascular innervation. As regards the appendix, the chief point of interest is the evidence which connects paroxyma hœmoglobium; certain skin troubles, *e.g.*, subcutaneous purplish mottling, urticuria, sclerodrum, certain affections of the joints, certain eye troubles, curious epileptiform, or maniacal attacks with local asphyxia.

THE two sides of the face are by no means alike. As a rule, the want of symmetry is confined to the upper part of the face. Among other singular eccentricities is the fact that the right ear is almost invariably higher than the left.

Notes on Books.

ARTICLE 188.

IN the current number of *The Journal of Laryngology and Rhinology*, is a note by Mayo Collier, in which he seeks to prove that the proper method of inflating the chest for singing and speaking purposes is to draw in the stomach and elevate the ribs, according to the old Italian school. A clinical note follows, by Dr. Wolfenden, on a case of epithelioma of the thyroid gland and trachea. The report of the Hyderabad Commission on Chloroform is noticed at some length, and the usual abstract, etc., complete the number.

E. CRESSWELL BABER, M.B.

ARTICLE 189.

Guy's Hospital Reports, vol. xlv. J. & A. CHURCHILL, 1888.

THIS volume contains a large number of valuable papers, to the more important of which brief reference may be made. The volume commences with a very complete and elaborate analysis, by Dr. Horrocks, of over 25,000 cases which have been attended during the last ten years by the Guy's Lying-In Charity. The mortality was 3·4 per 1,000. The patients are attended in their own homes. Short notes are given of the more important cases. Dr. Hale White has collected 29 cases of ulcerative colitis and other rare forms of intestinal ulcers, of which he gives the salient features and a general discussion. The great rarity of secondary hœmorrhage after amputation now-a-days, which is undoubtedly due mainly to antiseptics, is shown by Mr. Poland's paper on the statistics for the last 42 years at Guy's Hospital, from which it appears that there have only been 6 deaths from this cause, out of 641 amputations during the year 1877-1886. Eleven cases of alcoholic neuritis, most of them due to alcohol, but one probably to arsenic, are contrasted and their symptoms discussed by Dr. Taylor. Dr. Goodhart's contribution, is a paper on some cases of obscure pyrexia, for which he uses the term "Innominate Fever," and, as he says, we have still much to learn about pyrexia. Dr. Lawford Knaggs insists in his communication, on the evil effects of fluid in the peritoneal cavity, especially (1), after abdominal operations; (2), in acute peritonitis; (3), in tubercular peritonitis. A paper by Mr. Herbert Pennell, discussing 76 cases of cancer of the tongue, which won the Gurney Hoare prize in 1887, is reprinted in this volume. The book concludes with the list of specimens added to the museum during the past year.

New Preparations.

WE have received from Messrs. Burroughs, Wellcome and Co., specimens of their Lanoline Soap, which is the first soap introduced into this country containing an excess of fat. The excess fat consists of lanoline, which does not saponify, and is set free during the process of washing, and being absorbed by the skin, the latter is left soft and velvety, presenting a marked contrast to the roughness left after the use of soap in which the alkali has not been perfectly neutralized. In this way lanoline takes the place of the natural fat, which, under ordinary circumstances, is washed out; hence, it is specially indicated in persons with a delicate or irritable skin.

The Ichthyol Lanoline Soap is the embodiment in soap form of the fossil oil, called Ichthyol, which has of late years come so largely into use in dermatological practice. It presents the same advantages as the preceding, plus the medicinal qualities of the ichthyol.

Hygienic Preparations.

IVY SOAP.

We have received samples of this soap from the makers, Messrs. Goodwin Brothers, Manchester, and have subjected it to several tests. We find it to be a well manipulated article, of great purity, cooling to the skin, and in every respect a good toilet soap, while it is lower in price than many of the proprietary ones now in the market. One peculiar feature with Ivy Soap is, that it floats upon the water, which prevents the possibility of its being lost in the bath or wash-basin, and thereby obviates waste.

Patents.

[*This list is specially compiled for the* London Medical Recorder by Messrs. Rayner & Cassell, *Patent Agents, of* 37, *Chancery Lane, London, E.C.*

43. A hand warmer, suitable also for applying heat locally to invalids. John Craigie Robertson, 24, Southampton Buildings, London. (William Maxwell Campbell, New Zealand.) Jan. 1.

108. An improved ear trumpet. Harry Amasa Wales, 52, Chancery Lane, London. Jan. 3.

261. Improved electric truss. Geo. Thos. Rick and Wm. Reiginald King, 34, Chandos Road, Stratford, Essex. Jan. 7.

484. A new medicinal compound. Jas. Bilham, 68, Chippenham Road, St. Peter's Park, Paddington, London. Jan. 10.

561. Improvements in mouth-pieces suitable for infants' feeding bottles. Courtenay Spencer Foster, 24, Southampton Buildings, London. Jan. 11.

2,701. Kelly. Truss. 1889. 6d.

18,052. Blackburn. Trusses. 1889. 6d.

755. An improved rupture belt. Adolf Heim, 97, Newgate Street, London. Jan. 15.

862. An improved antiseptic respirator. Betsy Dranfield, 54, Fleet Street, London. Jan. 16.

936. An improved combined cabinet, commode, wardrobe, and invalid chair. Agnes Hardie, 323, High Holborn, London. Jan. 18.

940. Improvements in apparatus applicable to bedsteads and the like for the use of invalids and others. Harry Swayn, 3, Poets' Corner, Westminster. Jan. 18.

1,027. Improvements in devices for applying remedial agents or medical compounds for the treatment of catarrh and similar diseases. William Phillips Thompson, 6, Lord Street, Liverpool. (Joseph Mayhew Harding, United States.) Jan. 21.

1,048. An improvement in ointment called "Skin Aurora Herbal Ointment." Elizabeth Ireland, 3, Exeter Street, Brighton. Jan. 21.

1,059. The cure of burns and scalds. David John Tribe, Begelly Cottage, Begelly, R. S. O., Pembrokeshire. Jan. 21

1,173. An appliance for facilitating taking pills (medicine). Joseph Yates, 1, Quality Court, Chancery Lane. Jan. 22.

1,275. A new medicine. Chas. Oscar Andreae, 5, Hart Street, Mark Lane, London. (August Seyferth, Germany). Jan. 24.

1,367. An improved pocket inhaler. Wm. Kennedy Ferguson, 151, Strand, London. Jan. 25.

1,380. A solution of iodine for medical purposes. Robert Jas. Downes, 136, Fr. Baggot Street, Dublin. Jan 27.

1,553. The patent improved universal feeding bottle holder. Richd. Edward Holmes (trading as C. Jackson & Co.), 71, Octagon, Union Street, Plymouth. Jan. 29.

Specifications Published.

3,407. Campbell & Boyd. Obtaining chlorine, &c. 1889. 6d.

18,806. Stuttard. Rolls of surgeon's tow. 1888. 6d.

7,556. Teufel. Night commodes, &c. 1889. 6d.

4,037. Hannay. Liquid chlorine. 1889. 8d.

The above specifications may be had of Messrs. Rayner & Cassell, Patent Agents, 37, Chancery Lane, London, W.C., at the prices quoted.

[Should any of our readers desire to take out patents for inventions, either English or Foreign, and require advice upon the subject, the "Patent" Editor will be pleased to give them the benefit of his knowledge and experience. Communications addressed to the "Patent" Editor, Sanitary Record, 13, Waterloo Place, Regent St., S.W., will receive prompt attention.]

Miscellany.

German chemists have discovered in the cocoanut a fatty substitute for butter, and this new product has begun to be manufactured on a large scale.

A grateful patient recently presented to a church in the neighborhood of Vienna a portrait of the celebrated Professor Bilroth, representing him in the operating-room.

According to a Norwegian work on longevity the average duration of life in Norway is 48·33 years for males, and 51·30 for females.

Cremation is coming more and more into vogue in Germany. At Gotha one hundred bodies have been cremated since January 1st.

It is stated that the present French Chamber of Deputies contains forty-seven M.D.s, one *officier de santé*, one veterinary surgeon, one dentist, four pharmacists, and one chemist.

In separating the connective tissue of a monstrosity resembling the Siamese Twins, a Cincinnati pathologist found that one body possessed no heart, and died immediately after the operation. The missing organ was embedded in the stump attached to the side of the other body, and becoming gangrenous was removed. The remaining child ultimately recovered.

A New Building Material.—The largest sugar refiner of the United States has just taken out a patent for the process which he claims renders refined sugar harder and whiter than the best marble, and the resistance of this compressed sugar to atmospheric influences is said to be superior to that of any building material at present used. In support of his claims the inventor proposes to construct a new wing to the White House at Washington of his compressed sugar.

A herbalist from Walsall was recently committed for trial for having sold to a foolish man with a bad cold a cough mixture which nearly killed him. It appeared from the herbalist's own confession, as well as from the analysis of the mixture, that it consisted of diluted liquor ammoniæ and burnt sugar to colour it. When apprehended he had several bottles of the same concoction in his possession for sale, and no one knows how many persons he may have half-poisoned.

We learn from the *Indian Medical Gazette* that the following statistics have been recently published, with respect to the injuries by snakes and wild animals in India:—The total number of persons killed in 1887 was 22,348, and in 1888, 27,910. The cattle killed in 1887 amounted to 68,840, and in 1888 to 76,271. There was an increase in the number of wild animals killed from 18,901 to 20,709, but as regards the snakes, the number fell from 562,221 to 511,948, while the rewards declined from Rs. 165,423 to Rs. 159,253.

Iodoform Test for Sweet Spirit of Nitre.—The new Dutch Pharmacopœia, besides directing that sweet spirit of nitre shall be tested qualitatively with ferrous sulphate, prescribes the following quantitative test in which the formation of iodoform is made a criterion. Mix 5 c.c. of the spirit with 10 c.c. of water of ammonia, and add 2 C.c. of a solution prepared from iodine 1 part, potassium iodide 2 parts and water 2 parts. After the black precipitate formed is dissolved, a further addition of 2 c.c. of the iodine solution should not, within half-an-hour, cause the separation of crystals of iodoform.

Another Cure for Hydrophobia.—Dr. Bokai, a professor of Transylvania University, of Klansenderg, claims to have discovered an absolutely certain antiseptic against hydrophobia. His remedy consists of a simple mixture of chlorine and bromine sulphurous acid and permanganate of potash, in aqueous solution, with eucalyptus oil. With this the wound must be thoroughly washed. and then dressed with a piece of lint which has been soaked in the mixture. If this treatment is followed within a reasonable time after the infliction of the bite, it is said to completely destroy the virus.

According to the *British and Colonial Druggist*, a good depilatory is made by mixing together in fine powder 50 parts of barium sulphydrate, 25 parts of starch, 25 parts of oxide of zinc, and making into a paste with sufficient water. This is spread on the surface, which is to be freed from hair, about an eight of an inch thick, and allowed to dry. When this is effected (it generally takes about ten minutes) the mass is removed, leaving a perfectly hairless surface. Irritation does not occur, but the mixture should not be applied to the same place on two consecutive days.

In the case of Hopkins *v.* the Smethwick Board, tried in the Queen's Bench Division last week, it was decided that before a local Board can destroy insanitary houses they must not only give notice to the builder to pull them down, but further appoint a date on which the builder may attend before the Board to show cause why they should not be pulled down. The defendant Board in the present case gave the builder notice to pull down the house, but neglected to call upon him to show cause, and sent a staff of men to pull down the houses. Their lordships consequently entered judgment for the plaintiff, damages £60.

Dr. A. T. Weston, deputy coroner of New York, was called, not long since, to make the preliminary medical inspection of a child reported for inquest by a midwife. A German woman had been delivered of twins two days previously, one of them dying soon after birth, the second lingered nearly two days: such, at least, was the report of the woman. When Dr. Weston saw the child he suspected a spark of life remained within it, and in the course of half-an-hour or more he had the satisfaction of resuscitating the child. Some years ago, it is stated, a supposed dead baby reached the Morgue before the fact of remaining vitality was discovered.

The Literature of Gynæcology.—Dr. Skene, of Brooklyn, says that during the last eight years the literature of gynæcology has been enriched by 807 books, and 7,505 journal articles and pamphlets, or, on an average, about two books and eighteen articles a week. Gynæcology is an interesting subject to general practitioners, but many such, in this province at least, have not completed the whole series herein referred to, and would be quite pleased to have these able and zealous authors pause for a time, so that they might have some chance of catching up, or "getting abreast of the times," as the popular medical vernacular so sagely expresses it.

We regret to have to record the disappearance of our contemporary, the *Illustrated Medical News*, after an existence of nearly eighteen months. The deceased periodical has undoubtedly done medical journalism a very great service by stimulating its weekly rivals to accomplish prodigies of valour in the way of coloured illustrations and woodcuts. It was deservedly popular, but the enormous and crushing expenditure incidental to the production of such a journal has proved too much for its financiers pending the general professional support which would doubtless have been ultimately accorded. The coloured plates were for the most part of very great merit, and if the text did not quite equal them in excellence, that was rather the misfortune than the fault of the editors, whose enterprise does them credit.

Mr. Benjamin W. Ford writes:—"I have always understood that vaselines were products of petroleum obtainable by filtration only, and without either distillation or treatment with acid or chemicals of any kind. Hence their purity and absolute freedom from compounds which might—and undoubtedly would—act injuriously on the skin, especially when that is in an unhealty condition. On account of the great development of the vaseline manufactures, and the number of uses—both medicinal and for toilet purposes—to which it is now put, it is of very great importance to dealers and to the general public that the former should be able to know whether the article they are offering to the latter is genuine or otherwise. I should be glad to hear from some of your readers, who can speak authoritatively on the matter, and can give some hints as to the best means of distinguishing between the spurious and the genuine article.

Import of Patent and other Medicines into Russia.—By a Government declaration, recently published, patent medicines can only be imported into Russia after an inspection by, and with the assent of, the Medical Council of the Minister of the Interior. Samples will not be inspected unless accompanied by a full and explicit description. The import only of such patent medicines will be permitted in the preparation of which special methods or expensive apparatus are necessary; moreover, they must not be such as are liable to injury in transport. The import of "made up" medicines, not patented, will be permitted after the Medical Council has assured itself of their good quality, their capacity to keep for some time without spoiling, and the truth of the statements made in the announcements which accompany them. Cosmetics and similar preparations will only be inspected by the Council if accompanied by general statements concerning their effect upon health. But general statements concerning the action of the cosmetic upon the skin, the growth of the hair, the gums, or similar purely local and external effects will not subject it to an examination by the Council. Preparations and medicines approved by the Council will be entered as such on the list published by the Customs Department not later than the 1st March; this list is revised annually.

About Artificial Musk.—According to the *Journal de Pharmacie d'Alsace-Lorraine*, artificial musk is a chemical product, appearing in crystals of a yellowish white colour, and of a strong musk odour. For perfumery purposes the crystals should be dissolved in alcohol, with the addition of a trace of ammonia or carbonate of ammonia. This solution, which may be compared to tincture of musk, surpasses the latter in the intensity and penetrating power of its odour. The product to be used in perfumery must previously be diluted in a homœopathic manner. The following are the rather loose details of the manufacture of the article which have been deposited with the German Patent Office:—"Boil in a reflux condenser, toluol or toluene, CH$_8$, with one of the following halogen compounds of butyl, viz., chloride, bromide, or iodide of butyl, along with chloride or bromide of aluminium. The resulting product falls back into the water in the still, where it is decomposed and is distilled in a current of water vapour. The parts which distil between 170 and 200 degrees are collected separately, and treated with a mixture of nitric and fuming sulphuric acid. The product obtained from this process is washed in water and re-distilled in alcohol, from which the 'artificial musk' crystallises out." The patent rights for France and abroad have been disposed of to a syndicate of manufacturing perfumers. There is no doubt that the trade in natural musk, so far as the penfumery branch is concerned, is threatened with a very serious crisis. The use of musk in medicine is very restricted, and may even be said not to exist.

Mercurial Flannel.—A new treatment, introduced by Dr. Merget and adopted by a number of physicians, consists in causing the patients to wear on the skin flannel impregnated with finely divided metallic mercury. To enable pharmacists to readily prepare the flannel in question, Prof. P. Carles has published the following process: First select soft and thick flannel, and soak it for two or three hours in an alkaline bath consisting of 1 pound of carbonate of soda dissolved in 4 pints of water. The flannel, after one rinsing of cold water and a simple wringing, is now ready for the mercurous solution, which is made as follows: In a large porcelain dish place several pounds of quicksilver—enough to be sure of an excess—and add several pints of cold nitric acid diluted with water. No heat is to be applied, to ensure the formation of mercurous nitrate. When the reaction has ceased—the dish having been set aside in open air or under a hood for twenty-four hours—should no crystals of nitrate appear some concentrated nitric acid must be added and the operation continued. When crystals begin to form, it is a sign the solution is sufficiently concentrated, and the flannel, still moist and slightly alkaline, should then be dipped into it. After four or five hours' maceration, the fabric is withdrawn, allowed to drain off and soaked for a few minutes in a third bath made with 1 part of ammonia and 2 of water. As soon as the tissue has turned a grayish-black colour, it needs only drying in open air and protection from direct sunshine to be ready for use. The flannel thus prepared is employed as an improved substitute for mercurial ointment in local affections and in inhalations for general treatment. But as the patient must be exposed to mercurial vapours only and not to any flying metallic dust, the flannel should be incased within thin muslin or silk of a very close texture.

Estimation of Morphine in Opium.—Professor F. A. Flückiger estimates morphine in the following manner: 8 gm. of powdered opium are placed in a plaited filter 12 cm. in diameter, the funnel being slightly tapped in order to bring the powder to the bottom, and the whole dried at 100 degrees C. After half-an-hour, a mixture of 10 c.c. chloroform and 10 c.c. ether is poured on the powder, the funnel being covered and tapped a number of times; then 10 c.c. chloroform additional are poured on. After the liquid has drained off, the filter is spread out and the powder dried at a slightly elevated temperature. The powder is then shaken with 80 gm. water to which has been added 0·2 gm ammonium oxalate to separate the calcium present, and filtered after two hours. 42·5 gm. of the filtrate are treated in a small tared flask with 7·5 c.c. alcohol (sp. gr., 0·83), 15 c.c. ether and 1 c.c. ammonia (sp. gr. 0·96). After six hours, having shaken often, the contents of the flask are poured on two plaited filters, one inside of the other, and 10 cm. in diameter, the flask being rinsed with 10 c.c. water or an aqueous solution of morphine (1:5000) and poured on the filters. These are dried at slightly elevated temperatures and at last at 100 degree C. The morphine is then transferred to the flask which has been dried at 100 degrees C., and the whole heated to this temperature until constant. The morphine obtained represents one-half the quantity of the opium.

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ARTICLE 190.

THE MONTHLY MIRROR OF MEDICINE.

THE most interesting and important papers which have appeared during the month of February are mostly connected with neurological subjects, so far as British medical literature is concerned; and perhaps of most importance is a paper by Dr. Charlton Bastian, read before the Royal Medical and Chirurgical Society, in which he adduces facts to prove that in total transverse lesions of the spinal cord the so-called tendon re-actions and lumbar reflexes are *entirely* abolished, with the exception of the reflexes of the bladder and intestines, when they were found to be impaired to an extent which was specified. This is contrary to the usual opinions held by many physicians, and taught by writers on neurological subjects. Hitherto, it has been taught that the reflexes were absent only while the shock which the system sustained lasted, and that after the shock had passed off the reflexes became exaggerated. Dr. Bastian has observed cases in which total transverse lesions were present in the spinal cord in the lower cervical or upper dorsal region, in which all the tendon reflexes were abolished, and in which post-mortem examination showed the part of the cord below the seat of the lesion to be healthy. These facts are of extreme importance as enabling one to diagnose whether a total or a partial transverse lesion of the cord is present. They are also of interest in relation to the function of the cerebrum and cerebellum, for it is obvious that if the reflexes are abolished when the spinal cord is affected high up transversely, that other parts of the nervous system besides the spinal cord is concerned with the reflexes.

Next to these facts set forth by Dr. Bastian we would cause our mirror to reflect some of the remarks made by Dr. Buzzard on "the simulation of hysteria by organic diseases of the nervous system." Considering how frequently the physician is content to rest with the diagnosis "hysteria," the fact that underlying the so-called hysteria a serious organic lesion may exist cannot be too widely known. Dr. Buzzard thinks that, of all the organic diseases of the nervous system, disseminated sclerosis in its early stages is that which is most commonly mistaken for hysteria. He says, "Many of the symptoms of disseminated sclerosis are supposed to suggest of themselves a hysterical origin. It is particularly common in young females, symptoms showing themselves about the period of puberty. A sudden or a gradual loss of power in a limb of an apparently healthy female, a localised numbness, or pins and needles sensation, and complaint of loss of sight in one eye, are symptoms familiar enough as expressions of functional trouble. These symptoms may also be indications of organic lesions, and the local symptoms may clear off after a short time, just as they would in hysteria. After recoveries and relapses the characteristics of confirmed sclerosis show themselves. Dr. Buzzard further states that, in his opinion, the fact that the shifting loss of power from one limb to another, which is usually held to be indicative of hysteria, is an error. In hysterical paraplegia the limbs are often in a state of flaccidity; while in sclerosis a condition of spasticity is present which is very rare in hysteria. In hysteria the paralysis is most often complete."

As regards the eyes Dr. Buzzard states that in the hysterical patient the loss of sight is complete in the affected eye; while in disseminated sclerosis there is only more or less obscurity of vision. In cases of atrophy of the disc functional disorder must be discarded.

From Dr. Buzzard's paper we would pass on to the paper by Dr. Cagney on the "Mechanism of Suspension," in which he shows that the effect of suspension is to straighten the curves of the spinal cord, and, in this way, producing a total shortening of the spinal cord. He considers the good effect to be due to a breaking down of adhesions between the fibres, and to the removing of the impediments to the circulation. In connection with this we would reflect the paper by Drs. Russell and Taylor in which they mention 21 cases which have been treated by suspension. The suspension is done every other day, with the feet well off the ground, at first for half a minute, gradually increasing until a maximum of four minutes is reached, and the weight of the body during suspension is thrown more and more on the neck. The patients rest immediately after suspension. Some cases apparently improve, some remain much the same, and some suffer from epigastric pain, nausea, and syncope.

Leaving neurology, we would reflect Dr. Mott's paper on "Pernicious Anæmia." Dr. Mott states that the diagnosis of pernicious anæmia can be made with certainty if the following conditions co-exist: (1) General weakness and debility, from no ascertainable cause, coming on usually in middle life. (2) Symptoms and physical signs of cardiac debility, with no history or symptoms of valvular disease. (3) The presence of retinal hæmorrhage. (4) The examination of the blood shows the corpuscles greatly diminished in number, the diminution of colouring matter is proportional to the falling off in number. In one case the corpuscles were one-sixth of the normal, and the hæmoglobin also reduced to one-sixth. (5) Occasionally pyrexia. (6) A peculiar, shallow, lemon colour of the skin, very like a cancerous cachexia, but yet not attended by the same degree of wasting, but still occurring in considerable quantity in the abdomen. (7) The evidence of hæmolysis in the discharge of the excess of colouring matter by the urine and fœces. The stools are normal as regards colour, and the urine, although usually of normal or comparatively low specific gravity, is of high colour.

In the liver—in which iron is found in large quantities in the ferric state—the hæmoglobin of the corpuscles split up into an iron-free pigment of the nature of bilirubin or hydro-bilirubin, which passes out into the urine as urobilin.

We must now reflect, in a diminutive way, the paper read by Dr. Charteris on the impurities of the salicylicates, from which many of the so-called toxic symptoms, which occur during the administration of the salicylicates in acute rheumatism, were supposed to arise. We would be glad to reflect in our mirror, if some one would give us the opportunity, some of the symptoms which occurred during rheumatic fever before the salicylicates were used; for it seems probable that many of the so-called toxic effects may be merely the conditions of the rheumatic state, and not due in any way to the drug.

Professor Thomas Fraser gives an interesting lecture on the analgesic action of exalgine, which drug he has been giving in cases of neuralgia in doses of half a grain to one, two, three, or four grains.

Dr. S. A. K. Strahan gives an account of chloralamide as an hypnotic, for which object he gives it in doses of from 30 to 50 grains. He considers its action similar to that of chloral, but not so depressing to the heart.

We must allude to the case of Thomsen's disease shown at the Medical Society. The patient was 20 years old, who had a marked family history of the disease. He could do his work as a clerk quite well, but experienced stiffness when he commenced work, particularly if the room was cold. The stiffness was worst after a long rest, as on rising in the morning.

Of the American literature for February which has been before our Mirror, mention must be made of a paper translated by Dr. Epstein, written by Professor I. N. Obolensky, on "The Nervus Vagus and Angina Pectoris," in which the Professor concludes that angina pectoris may occur from an idiopathic affection of the left vagus. The paper is interesting, and will be reviewed in our next number.

Another paper of interest is one by Dr. Schenk on "Some Thoughts on the Etiology, Pathology, and Therapeutics of Phthisis Pulmonalis," in which Dr. Schenk states that phthisis being a disease of hereditary or acquired tissue degeneration, its rational treatment must lie in tissue restoration, in the use of such measures as will arrest retrograde action and, if possible, restore the degraded cells to their normal condition. He cites Dr. William Porter, of St. Louis, who, in 1888, wrote: "No practical gain has been made based upon the hypothesis that the microbe is the factor *per se*. So far as our knowledge extends, the bacillus is to phthisis as smoke to fire; it may indicate its existence, yet neither incites nor intensifies the combustion.."

One more paper must be reflected, viz., an article on the treatment of symptomatic hæmorrhage; and we would quote the following:—"Too often does the physician, urged to stop the hæmorrhage, turn with confidence to ergot as the great hæmostatic, and, in giving the remedy, feel that he is 'doing something' to the quieting of his own conscience and of the clamour of the patient's family. No matter from what the hæmorrhage may come, or to what cause it may be due, ergot is looked upon by many as the panacea for hæmorrhage. From the fact that uterine hæmorrhage is controlled by ergot, the conclusion is drawn that all hæmorrhage can be surely and safely checked by the same means; yet, probably, the action of ergot as a stimulant to the contractile power of the uterine *tissue* has more to do with its ability to stop *post-partum*, or other hæmorrhage from the same organ, than has any hæmostatic property possessed by the drug. It is different when we have to deal with hæmorrhage due to the rupture of a vessel from local disease of its walls or of the surrounding tissue. By giving ergot in the latter condition we increase blood-pressure enormously by contracting *all* of the arterioles of the body, we increase the strain upon the diseased and *weakened vessel-wall* as well as upon those of the healthy vessels, and we must of necessity not only render further rupture possible, but also increase the outflow from the bleeding vessel, thereby perhaps destroying the chance of clot-formation, by which alone the leak can be repaired. It is impossible to see how ergot could have any selective action upon the ruptured vessel, picking it out from the rest and diminishing its calibre; and it is but natural to believe that a vessel so diseased as to suffer rupture of its wall, cannot contract so well as do the healthy vessels throughout the rest of the body."

We regret that we cannot reflect any of the medical literature from Berlin or Vienna in this month's Mirror.

ARTICLE 191.

MIRROR OF SURGERY.

SURGERY, in these days, is ever progressive, and in the paper in the *Lancet* upon "The Treatment of Prolapse of the Rectum by Excision," Mr. Treves deals with a subject which is certainly attractive from a surgical point of view. He boldly commences by saying that the object of his remarks is to criticise the surgical procedures which are at the present time advised for the treatment of severe and intractable forms of prolapse of the rectum, and to suggest that the best and simplest and most efficient mode of dealing with such cases is by the complete excision of the prolapsed part. Prolapse of the rectum is most commonly met with at the two extremes of life—in quite young children and in those who are advanced in years. The frequency of the condition in children is explained by many circumstances, as by a very susceptible reflex nervous apparatus; by an uncertain and feeble muscular control; by frequent digestive disturbances; by an unusual activity of the digestive canal; and by the occurrence of many conditions involving straining, such as calculus in the bladder, worms, phimosis, polypi, scybala in the rectum, and diarrhœa. Moreover, in the infant, the rectum lies rather in the abdomen than in the very small and shallow pelvic cavity, and is thus more directly exposed to pressure. The gut also is nearly vertical, and has a comparatively extensive meso-colon, and but loose lateral connections. The rectum is less curved in a child, and the prostate is small. Tenesmus is a frequent feature in the developmental periods of prolapsus recti, just as contraction of a segment of the bowel would appear to be a necessary preliminary to invagination. In a sickly child, with a feeble muscular system, an attack of whooping cough may lead to a protrusion of the rectal mucous membrane. In the young, prolapsus recti is usually an active and often an acute process. The protrusion may take place suddenly, and be attended by violent symptoms. In the aged, on the other hand, the condition is usually due to gentler causes, is more gradual and more chronic, and may be described as a passive rather than as an active process; the tissues are relaxed, the muscles are enfeebled, and the nerve apparatus of the anus is dulled and irresponsive. The prolapse is commonly associated with prolonged expulsive efforts, such as may attend stricture, enlarged prostate, constipation, and chronic bronchitis.

Two forms of prolapse are described by authors—the partial and complete. The former, in which the mucous membrane is alone protruded, while the muscular coat remains unchanged in position; the latter, in which the whole of the coats of the rectum are prolapsed, and in which the lesion concerns not only the mucous and the muscular tissues, but possibly the serous coat also.

In the matter of treatment the author points out that the majority of cases of prolapse of the rectum yield to simple measures—to rest, to the removal of the cause of the trouble, to the improvement of the general health, to the regulation of the bowels, and the use of astringent applications. In children, the cases must be few indeed in which any active surgical interference is necessary. In the aged, the question of surgical measures may arise when all the usual means have failed, and the distress occasioned by the prolapsus is such as to justify an operation. As a matter of common experience, however, the prolapse of the aged often induces so little inconvenience as to call for no radical measures, while the state of the patient's health is usually such as to forbid any but the most necessary of surgical operations.

The author then proceeds to give the notes of three cases in which he practised excision of the prolapse. All the cases concerned subjects who had not passed over the period of middle age; and the prolapse in each had existed for some years, had resisted the milder forms of treatment, and had given rise to very considerable distress. The description of the operation which the author performs in these cases is included in the paper.

Article 192.

THE INFLUENZA EPIDEMIC.

Various Continental authorities are here brought together.

Prof. **Drasche**, of Vienna (*Wiener Med. Wochenschr.* No. 6., 1890), writes to the following effect:—The epidemic existed in Bokara in May of last year. From the Asiatic (Turanian) Steppes, whence it started, it advanced in two directions, viz., west and south. The disease is quite independent of climate, for Egypt and the north of Russia have been equally affected. It is also independent of soil and water. It is a true epidemic, advancing rapidly by leaps over adjacent countries, and radiating from large centres of population. It remained, as a rule, about a month in the same district, sometimes longer. No disease known is so extensively prevalent when it appears. It equally affects all ages and conditions, and both sexes, also all races. Its incubation period is not known, but is evidently extremely short; and it may affect the same individual several times. The old, the sick, and the weak are predisposed. Only the air can be the carrier of such an infection as this: this is also the ancient belief; and the idea of direct contagion has never obtained much credit.

Prof. Drasche then shows, by tables, that in Vienna the mortality from pneumonia during the past year, exclusive of December, was lower than during several years previous, but during that month it showed a remarkable increase. It is not true, therefore, that a pneumonia epidemic had begun before the influenza, though, on the other hand, it is not asserted by the author that the pneumonia was directly due to the influenza. As regards the weather, extraordinary conditions prevailed in Vienna both before and during the epidemic—viz., in November and December respectively. In *November*, the temperature was normal, but the atmospheric pressure was 7 mm. higher than usual; the greatest variation in one day was 18 mm. A gentle south or south-west wind prevailed. The average relative humidity was 83 per cent. (supposing saturation=100), the lowest observation was 52 per cent. The sky was very cloudy, and the ozone indicated was 5·6. In *December*, the conditions altered. The temperature was 3·6° C. below the average, the barometric pressure 6 mm. above normal; the greatest variation was 14·6 mm. At first there was a rather strong north-west wind, but after this scarcely any wind at all, what there was being south or south-west. The sky was extremely overcast; the sun shone for only 15 hours all the month. The average moisture for the month was 93 per cent., the lowest reading was 70 per cent. on December 17. The average was quite 10 per cent. above that of any year during the last eleven years. The ozone percentage was 5 during the first few days, then *nil*. Thus, during the epidemic the meteorological conditions were—a high barometric pressure, no wind, great cloudiness, and a high degree of moisture.

Prof. **Weichselbaum**, of Vienna (*Ibid.*), enters into the etiology and pathology of the subject, with the assistance of Drs. Faulhaber and Klein. "That the influenza is an infectious disease no one will doubt at the present day, and, therefore, a bacteriological investigation is indicated; but here difficulties present themselves. The disease seldom causes death. Further, we do not know what are the essential alterations due to it, and what are mere complications." The blood and sputum of patients were examined by the author. Examination of the blood gave negative results in two cases, both microscopically and with culture experiments. The sputum was examined in twenty-one cases by (*a*) microscope, (*b*) plate-cultures, (*c*) inoculations. The microscope showed abundant cocci with staining capsules, in every respect like pneumonococci, and not like what is found in ordinary acute catarrh. Plate-cultures gave the same (diplo-)cocci, apparently; but inoculations into mice and rabbits showed that they possessed only a third of the virulence of true pneumonococci. Streptococcus pyogenes and staphylococcus pyogenes were only found in two cases. Friedlander's bacilli were not seen. The pneumonococci were found in (albuminous) urine in one case. The autopsies were made, the patients having shown distinct symptoms of influenza in the early stage, and death having resulted from various inflammations. In nearly every case acute suppurative inflammation was present in the cavities communicating with the nose, especially the frontal cells and the antrum of Highmore. The diplococci already mentioned were found in great abundance in the pus, as shown by cultures; the latter caused death in all the animals inoculated. In one case the suppuration had caused death by reaching the dura mater; in three cases there was otitis media. The spleen was usually enlarged, but never to a remarkable extent.

Reviewing the above results Prof. Weichselbaum considers that death is always caused by the pneumonococcus, either as the primary and essential cause of influenza, or as a complication. It must be remembered that the pneumonococcus does not necessarily cause pneumonia, but may attack the heart, brain, middle ear, serous membranes, etc. But the epidemic extension of influenza is not explained by this coccus, though pneumonia is sometimes epidemic. Possibly, some unknown influences, perhaps meteorological, may modify it, and this would explain the rapid extension of influenza. If the second hypothesis be accepted, the presence of the pneumonococcus becomes merely accidental. A decision is at present impossible; but Weichselbaum leans to the hypothesis that the pneumonococcus plays a secondary *rôle*, but not an unimportant one. This assumption, he adds, is more plausible than the idea that there was in Vienna simply a concurrence of two epidemics—influenza and pneumonia.

Dr. E. **Levy**, Strasburg, writes on "Bacteria found in Cases of Influenza" (*Berliner klin. Wochenschr.*, No. 7, 1890). The sputum was diligently examined in all cases treated in the Strasburg clinic. Besides staphylococci and streptococci, the diplococcus pneumoniæ (Fränkel) was found in abundance; but not much importance is attached to this, as all three kinds have been found in the saliva of healthy persons. Otitis media was a frequent complication (7 cases). In all these cases the pneumonococcus was obtained in pure cultures, which caused death in mice. Moreover, empyema (5), seropurulent (1), and serous (3) pleuritic exudations were met with. In all these, again, the same coccus was obtained, sometimes, also, the staphylococcus pyogenes albus. In the cases of bronchial pneumonia, the pneumonococcus was only once obtained; it was found also in one case of lobar pneumonia. Altogether, it was found in 17 out of 18 cases, a striking result; and it was identical in many respects with Fränkel's diplococcus of pneumonia, except that it did not cause death in mice so rapidly, and its growth in agar was not quite so vigorous and distinct. In Strasburg the increased mortality from pneumonia attracted attention as in Vienna. Recent investigations tend to show that various micro-organisms, not the diplococcus alone, may cause pneumonia. Still, it is possible that this coccus may have something to do with the influenza.

Artur Kollmann, of Leipzig (*Ibid.*), gives the results of microscopical examinations of the blood. The fresh blood was examined in typical cases of influenza, under every precaution as to purity; various stains were also used. The result was negative. Nothing was found that may not be found in the blood of healthy persons. The author adds a postcript on Klebs' article on "Influenza-blood," in which he states that he saw nothing of the flagellate bodies which Klebs claims to have found in the blood in influenza, *i.e*, within the red corpuscles.

Dr. **Tranjen**, military surgeon in Listov, Bulgaria (*Ibid.*), writes, that he found that a daily dose of quinine (5 grains in brandy) had a striking effect in preventing the extension of the influenza in barracks, where it had already got a footing; while in the adjacent town it spread with astonishing rapidity. Dr. Graeser had recommended it as a prophylactic.

Rippert has found the streptococcus pyogenes so frequently (*Deutsche med. Wochenschr.*, No. 4, 1890) that he does not hesitate to regard it as possibly the exciting cause of influenza. Finkler, Du Cazal, Bouchard, Laveran, Vaillard have also found it to be present. But this micro-organism is found, primarily or secondarily, in the most varied inflammations; it seems to be, in fact, ubiquitous. The special kind of pneumonia which Finkler and Rippert assert to follow influenza, they consider to be due to this streptococcus ("streptococcus-pneumonia"). The staphylococcus has also been found in influenza. The pneumonococcus has been found by Du Cazal, Weichselbaum (v. *supra*), Leyden, Bernhard, Krehl, etc.

Klebs (*Centralblatt für Bakteriologie*, No. 5, 1890) claims to have found certain flagellate organisms in the interior of red blood-corpuscles in influenza—moving protoplasmic masses provided with a long process. Dr. Neumann says that, owing to our helplessness to prevent epidemic influenza, we shall have another opportunity of looking for these organisms.

Turning, for a moment, to the clinical side, we find the report of a discussion in the *Verein für innere Medicin*, in the *Berl. klin. Woch.*, No. 1. Herr Renvers declares that the spleen is not enlarged in influenza. Erythema had been met with, and, in one case, urticaria. Herr Fürbringer stated that only severe cases had been received, and no patient above 50 years old had applied for admission, which went against the assertions of some authors that old age predisposed. The influenza did not spread from person to person. Though about 1,000 patients had been received, only one nurse had taken the disease. Splenic tumour existed in a few cases. Herr Löwenstein had treated 78 cases in all parts of Berlin, and regarded personal infection as possible. All showed, at first, redness and infiltration of the uvula, with obliquity of the same. Herr P. Guttmann had found the age from 20 to 30 years as most liable. Herr Hirsch considered influenza to be contagious. Herr Kalischer declared that over half the population of Berlin had been attacked, and that the affection was not contagious. In this he was supported by Herr Baer, who had treated 118 cases in adults and 25 in children. Herr Leyden remarked on the discrepancy of views as to contagiosity. According to Hirsch the extension this time was miasmatic (but *see* above); according to Nothnagel, parasitic. The short duration of the disease spoke for its miasmatic origin.

At a meeting of the Gesellschaft der Aertzte in Vienna, February 14, Prof. **Gruber** stated that in nine cases examined he had found the three kinds of micro-organisms already seen by so many. The colonies of streptococci, in all respects save one, viz., that they were not so fatal to mice, exactly resembled those of "pneumonococci."

Prof. **Kundrat** remarked that the lobular pneumonia, following influenza-bronchitis, was peculiar in character. The exudation was highly fibrinous; moreover, the anterior and upper parts of the lungs were attacked as well as the posterior and inferior. The pneumonic patches found *post-mortem* were very large ("the size of a nut"). In nearly all such cases the patients were young and in previous good health. Gangrene had followed this pneumonia in 4 cases, meningitis 3, cerebral abscess 1, and endocarditis 2. The severe complications all ceased with the influenza, and were therefore evidently connected with it in some way. It could not be true that, as Nothnagel asserted, they had had to deal with two perfectly independent diseases, viz., epidemic influenza and endemic pneumonia. The above processes were, of course, no essential part of influenza, they were rare complications, analogous to the complications of acute exanthemata by streptococci.

Dr. **Kowalski** had sought for a specific micro-organism in sixteen cases. The blood yielded nothing abnormal. The sputum revealed the staphylococcus pyogenes aureus and albus, the streptococcus pyogenes, also Fräenkel's and in one case Friedlander's, pneumonococcus. Besides these, a diplococcus was found arranged in chains of 5 or 10. The growth was quite transparent (on agar), staining was easy; growth occurred only at the temperature of the body, and very quickly reached maturity. As regards the air as a carrier of influenza, there had been no steady wind to account for its spread over all Europe. Personal infection afforded equal difficulties as a theory. The speaker finally considered influenza to be due to some unknown atmospheric influence, while its complications were due to micro-organisms already known acting secondarily.

Prof. **Nothnagel** read out data furnished by Prof. Babes. In Bucharest, two months before the influenza appeared, a peculiar malignant bronchitis was observed, with very viscid secretion, and leading to suppuration, necrosis, abscess, etc., as in Kundrat's cases. In 8 cases, organisms resembling the diplococcus pneumoniæ were found, also during the influenza period, but any etiological connection was questionable. As regards the increase of pneumonia in Vienna, he had never denied that influenza caused peculiar alterations in the lungs, but a great many cases of typical croupous pneumonia had occurred, and they could not be due to influenza. The pneumonia due to influenza was different—it was insidious, and accompanied by broncho-pneumonic infiltration. It was never like Finkler's "streptococcus-pneumonia," and resulted from the confluence of minute lobular patches.

Prof. **Rosenbach**, of Breslau, contributes an article to the *Berlin klin. Wochenschr.*, No. 5, 1890, which may thus be summed up:—In the pure form there is always shivering at first, that is the invasion is sudden, and the fever only lasts two, or perhaps three, days, but gastric symptoms often occur during convalescence. The catarrhal form is different, being much more insidious and chronic. Fugacious erythemata occurred in some cases, in women only, in the arms and breast. Ædema of the eyelids was often severe. Respiratory catarrh is only a complication of influenza, not an essential process. No swelling of the spleen was ever made out. Delirium tremens was never so frequent as during the epidemic; the connection with influenza is doubtful. Croupous pneumonia was also much more frequent than usual, and delirium often followed. This pneumonia was seldom fatal, and no connection with the epidemic is asserted. The increased catarrh, pneumonia, and delirium tremens, while separate from influenza, show that some unfavourable influence was at work. The author is far from considering influenza as an infectious disease, dependent on a *contagium vivum*, and, in fact, denies contagion altogether. The cases of pneumonia crouposa treated during one month were 20, in the same period last year, 6; of delirium tremens, 20, and 1 respectively.

[*Rep.*—The etiology of influenza is so far quite unexplained. Everything connected with it speaks against its being a bacterial disease. It affects whole countries at once; its onset is sudden; its course rapid; it is not contagious, according to most observers; the spleen is not enlarged, the discrepancy of observations prove this, and one attack does not protect.]

E. J. Edwardes, M.D.

Article 193.

CZERNY ON THE SURGICAL TREATMENT OF TUBERCULAR PERITONITIS.*

Professor Czerny, of Heidelberg, has recently published his views on the results and prospects of surgical intervention in cases of tuberculosis of the peritoneum, and of viscera enclosed within this membrane. It is pointed out, in the first place, that although the collected records of the results of surgical operations in cases of tubercular peritonitis seem to show that this affection is very amenable to such treatment, it should be remembered that tubercular inflammation of a serous membrane usually indicates that the tuberculosis has reached an advanced stage, and has become diffused. Tubercular peritonitis is regarded as being, in the majority of instances, a secondary affection, set up as a result of incision from the side of the pleura, or from the intestinal canal, the mesenteric glands, or the uro-genital organs. Czerny grants that surgical treatment of tubercular lesions may, under certain conditions, bring about an improvement of the nutritive processes of the patient, and thus help him to eliminate the infected virus, and, in cases of restricted localization, lead to a definite cure. In cases, however, in which there are many infecting foci, the struggle of the organism against the disease, especially at an advanced period of life, is attended with much difficulty, and is too often a very hopeless process. Czerny suggests that, in cases of tuberculosis of the genital organs, the intestinal tract or the mesenteric glands, the surgeon should endeavour to remove by operation the local affection before it has had time to set up peritonitis. The surgical treatment, however, of intestinal and mesenteric tuberculosis has not hitherto had any brilliant results, as the diagnosis of such lesions is generally very difficult. The determination of the tubercular nature of an attack of peritonitis will, in many instances, be much helped by the previous history of the patient, by his family history, and by the processes in other regions of the body of former tubercular lesions, or of recent lesions of the same origin. It is held that the prospects of surgical treatment in cases of tubercular peritonitis will depend on a distinction being made between the variety of this affection which is characterised by the presence of fluid exudation and miliary tubercles, and that in which it presents itself in the form of dry and adhesive peritonitis, in which large and tumour-like nodules of tubercular material are to be met with. It is in the former class of cases that the surgeon has usually intervened, and the removal of the effused fluid has certainly been followed by some good results. Cases of the second class, in which the prospects of affording relief are much less favourable, have seldom been treated by surgical means. Czerny seems disposed to think that the dry form of tubercular peritonitis is an advanced stage of the ascitic form, and that it is developed after the absorption of the fluid effusion. Clinical experience has proved that incision of the anterior abnormal wall, and removal of the fluid in the first mentioned form of tubercular peritonitis ought, as a rule, to be preferred to any medicinal or expectant method of treatment. Czerny is of opinion, however, that the ultimate results of such treatment is not—so far as can be made out by a study of collected cases—very encouraging. Although the operation itself may be free from much immediate risk, still surgical interference may favour, indirectly, the further advance of the tuberculosis. Most of the recorded cases, it is held, have been published too prematurely, and it is thought that if the subsequent progress of patients submitted to such treatment had been followed up after discharge from hospital, the results of surgical intervention in cases of abdominal and peritoneal tuberculosis would cease to be regarded as satisfactory. Czerny is supported in this opinion by Späth and Schede, who have also warned surgeons against a too sanguine expectation of good results from operative treatment applied to subjects suffering fom tubercular peritonitis. This article contains the record of sixteen interesting cases in which operations were performed by the author on the abdomen and some of its contents for the removal of tubercular lesions.

Article 194.

ABADIE ON THE TREATMENT OF DETACHMENT OF THE RETINA.*

The author commences by enumerating the various methods of treatment that have been adopted; none of them, however, with any great degree of success. He considers that the various excellent works that have recently been published on the pathology of this affection, so far from facilitating its treatment, have done much to retard it, since, being based on pathological material derived from a late stage of the affection, they have given rise to a false conception of the conditions that obtain in the early stages.

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* "Beitrage zur Klinischen Chirurgie Metaillungen aus den Kliniken zu Tübingen, Heidelberg, Zurich und Basel," bd. vi., hft. 1.

* *Annales D'Oculistique*, 1889.

At the Paris Congrés D'Ophtalmologie, in 1888, the author proposed a method of treating detachment, the basis of which was to puncture the sclerotic at the seat of the detachment, to obtain adhesion of the retina at the seat of puncture, and to prevent any subsequent distension of the globe. After having punctured the sclera in the usual way, he performs a sclerotomy, which allows the globe to collapse slightly, and causes the low tension to be maintained. In order to promote adhesion he injects a drop of Tr. iodi. The results were satisfactory. If, however, more fluid was injected too much irritation was set up and the condition aggravated. This latter circumstance led to his abandoning the operation. Since then, however, Schöler has used injection of iodine with good results, and this led the author to resume his treatment. The results, however, were not satisfactory. One complete success was obtained; but there were several accidents in other cases, as violent inflammation, with a tendency to consecutive atrophy of the globe and secondary cataract; indeed, Schöler himself recognised that the proceeding was too dangerous.

It was evident that the reaction that followed the injection of even a single drop of tincture of iodine was apt to be too severe, but the author belives that in the following he has found an injection which is safe and efficacious: Tr. iodine 5 grms., water 5 grms., iodide of potass 0·25 centigrams. The eye having been cocainised, the sclerotic is punctured 8-10 cm. from the corneal margin, in a situation corresponding to the middle of the detachment. A rather wide Graefe's knife is used for the purpose, and the fluid is allowed to escape by making a quarter revolution of the blade in the wound. A certain amount of collapse of the globe is an advantage. A blunt silver canula is then introduced 4 or 5 mm. into the wound, and a drop or a drop and a half of the fluid is injected. Some reaction follows, The next day there is sometimes a perceptible diminution in the size of the globe, but this gradually disappears. If an ophthalmoscopic examination is made 24 hours after the operation, the retina will be found to have become reapplied. The author gives no statistics of the number of operations, and no definite statement of the results obtained, as the operation is not free from danger; and as success has been claimed for so many other methods of treating this most intractable condition that have soon been abandoned, we confess that we should like to have seen a detailed statement of results.

W. Adams Frost.

Article 195.

PETTYJOHN ON TREATMENT OF RHEUMATISM.*

Few diseases have given rise to so many theories in regard to causation and to treatment as rheumatism. This fact may be explained by its universal prevalence, by the amount of suffering it produces, and by the grave complications, near and remote, with which it is often accompanied. The disease is one of great antiquity. Quite lately Mr. Eve exhibited at the Pathological Society some bones taken from an Egyptian tomb, dating about 1300 B.C., which showed osteo-arthritic changes that may be reasonably referred to rheumatic processes. In temperate and cold climates the constant occurrence of the malady has forced its study upon everyone actively engaged in the practice of medicine. Nevertheless, it must be confessed that the exact nature and origin of the rheumatic poison have not, so far, been satisfactorily determined. At the same time, careful observation has led to the laying down of well recognised and definite principles to guide the physician in his treatment.

The present paper describes treatment, general and local, of the disease and its complications. From a clinical point of view, the author discusses modern remedies, especially the salicylate compounds and salicin. The history of two acute cases, successfully treated by large doses of salicylate of sodium, is given. The first was accompanied by a heart murmur and very great prostration, while the second was complicated by malaria, which required additional specific treatment by quinine.

General indications are to alleviate pain, reduce temperature, and rid the body of the *materies morbi* that is partly the cause, partly the result of systemic disturbance. Patient to be placed in a light, airy chamber, having two beds by preference. He should be clothed in flannel (in homely phrase, "put between the blankets") and be kept in a state of absolute rest of mind, body and eyes. Affected joints may be wrapped in wool and bandaged, or swathed with opiate lotions beneath oiled silk. If not greatly swollen, a plaster of Paris bandage is recommended with fixation of joints and elevation of limb. Diet: Milk, liquid food, raw eggs, custards, lemonade, effervescing waters, citrate of potash in solution and other cooling drinks. In extreme hyper-pyræxia, which will not yield to drugs, the cold bath is advocated, its effects being carefully watched. The water is to be cooled rapidly, but gradually, from 94° F. to 68° F. If patients are moderately strong, the bath should be given for twenty minutes daily during convalescence.

General remedies are antiseptic alteratives, laxatives, diuretics and tonics. Most practitioners will agree as to the value of a smart calomel purge at the outset of an acute attack, followed by laxative and diuretic drinks. Special remedies are next briefly reviewed from a clinical standpoint. Antipyrin, according to Slee and others, continued for a week or ten days in doses of four to six grains per day, gives good results where antifebrin and salicylic compounds have failed. Fowler's solution, in five-minim doses, gradually increased up to tolerance, and then lessened, continued for a month or six weeks, is said to answer well in mild non-febrile cases. Cascara sagrada, fifteen to twenty drops every four hours, is extolled by some observers. The sovereign remedies, however, are the salicylate compounds. In an acute case, twenty grains of salicylate of sodium should be given every two hours for the first twelve hours, or until *tinnitus aurium* is produced. The same dose is to be given every three hours during the next half day, and afterwards at intervals of four hours for four or five days. The total amount administered to be regulated, viz.:—(1) Reduction of temperature; (2) Relief of pain; and (3) Depression of heart's action. The most frequent cause of failure of the drug is insufficiency of amount given; in all cases its use should be continued for a fortnight. The author has not noticed heart or brain mischief when the salicylic treatment has been used from the beginning, and where there has been no previous lesion of those parts. It is important to bear in mind that to cure the rheumatism is not to cure heart mischief, for the effect may remain after the cause is removed. The great point is to prevent cardiac complications by early and appropriate treatment. After subsidence of acute symptoms, a prolonged course of tonics is indicated.

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* *Med. and Surg. Rep.*, Philadelphia, Feb. 1, 1890.

Case one is that of a man, 32 years of age, suffering from a severe attack of acute rheumatism. When seen, after seven days' illness, he was in a state of great prostration, and the stethoscope revealed a mitral systolic murmur. The fever ran high, with excessive vomiting and sweating. Twenty grains of the salicylate were ordered every two hours for twelve hours, and then every three hours for a like period. Relief was most marked and rapid.

The second case was that of a woman, 24 years old. She suffered from acute rheumatic symptoms, with further complications of dysentery and a daily attack of ague. Thirty grain doses of salicylate relieved the rheumatism, but quinine was needed to check the malarial symptoms. In the author's opinion, such mixed cases are of common occurrence. He believes that this patient was invaded at one and the same time by the schizomycetes both of malaria and of rheumatism; and further, that while there are analogies between the two micro-organisms, in his opinion, they are as distinct from one another as the bacillus of anthrax is from that of phthisis. Clinical observation has shown that the salicylate compounds counteract rheumatism just as quinine relieves malaria, but how those remedies act is uncertain. His own theory appears to be that the salicylic compounds arrest the disease chiefly by their antiseptic action, destroying or rendering inert the schizomycetes concerned in its production.

It will thus be seen that the author unreservedly adopts the theory of a specific micro-organism in rheumatism. Its presence in the system would intelligibly account for the series of vasomotor and trophic changes and febrile disturbances that characterise the disease. The theory that ascribes rheumatism to a germ origin has been advanced for some time; but the actual presence of a bacterium has not yet been demonstrated. Rheumatism, moreover, does not present the strong grounds for such an inference that we find in many diseases, such as scarlet fever or small-pox. The chief points in favour of the more definite *fons et origo mali* may be summed up thus:—(*a*) Systemic fever, with certain characteristic symptoms; (*b*) The marked curative action of antiseptic drugs; (*c*) The tendency to attack weak or damaged tissues. It may be said that so far we are tolerably certain as to the exact micro-organisms of anthrax, of Asiatic cholera, of leprosy, of one variety of erysipelas, and of what has long been known as pyæmia. There is still room for investigation, both as regards Friedländer's micrococcus of pneumonia and Lustgarten's bacillus of syphilis. Should the existence of the rheumatic microbe be proved, a curious field of speculation would be opened up as to its dissemination. In some recent researches* into the transmission of enteric fever, it was shown that the dust of an infected barracks was extraordinarily rich in bacilli, among which that of typhoid could be identified. If this observation be confirmed, a large and practical field is likely to be opened up to preventive medicine in the dust habitats of diseases dependent on specific microbes. And if, moreover, the germ origin of rheumatism be established, a vast weapon may be placed in the hands of the sanitarian for attacking the scourge in its stronghold.

David Walsh.

Article 196.

FRIEDHEIM ON THE TREATMENT OF ACUTE GONORRHŒA BY INJECTIONS.*

In this paper, Dr. L. Friedheim gives a detailed account of very numerous experiments on the treatment of acute gonorrhœa, carried out in the clinic of Professor Neisser, at Breslau. The author begins by remarking that, for the acute stage of gonorrhœa those means are most suitable which (1) kill the gonococci, (2) do not injure the mucous membrance, and (3) do not increase the inflammatory symptoms; while in the subacute stage, in which, in spite of subsidence of the inflammation, gonococci often persist in the epithelium, one is often compelled to promote their elimination by increasing transudation and purulent exudation. The anti-parasitic power of the injection to be used is the most important consideration, and a large variety of drugs were tried to determine which was most effective in (*a*) killing the gonococci, (*b*) influencing the inflammation, and (*c*) promoting desqaumation of the epithelium. Among the substances experimented with, in solutions of varying strength, were the formamide, the salicylate, and the perchloride of mercury, zinc, lead, tannin, bismuth, permanganate of potash, pyrogallic acid, iodoform, creasote, boric acid, antipyrin, rosorcin, creolin, thallin, and, besides many others, nitrate of silver. Of all the injections which were used those containing nitrate of silver were found to be the best, and the author therefore recommends that the treatment of acute gonorrhœa should be begun with injections of nitrate of silver, varying in strength from 1 in 4,000 to 1 in 2,000, from four to six times a day. The first day the discharge generally becomes thicker, more copious, and more purulent, but after about four days it diminishes, becomes thinner, and contains more epithelium. The gonococci also diminish in a remarkable manner, and after a few days may disappear altogether. The number of injections of nitrate of silver may now be reduced to two, and afterwards to one a day, other injections, of zinc or boric acid for example, being now used also. But the nitrate of silver is to be used once a day for many weeks. In the case of very sensitive patients, the number and strength of the injections may be lessened, a solution even of 0·1 to 500·0 having anti-parasitic power; but if the nitrate of silver cannot be borne at all, then other substances such as salicylate of mercury or thallin may be used. In the very rare cases in which no injection can be tolerated internal remedies are to be given. Of these drugs experiments were made with copaiba, cubebs, turpentine, oil of gaultheria, sandal oil, kava kava, ichthyol, creolin, etc., but the only one that gave good results was copaiba. In 14 out of 40 thus treated the effect on the gonococci was marked, the smallest dose given being 16 capsules (each containing about 10 drops) in two days. In the other cases increase of the capsules up to 12 a day gave negative results; but in all cases in which copaiba was prescribed, the purulence of the discharge diminished.

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* Lond. Med. Rec., p. 70, Art. 178.

* Archiv für Derm. und Syph., No. 4, 1889.

The effects of the other drugs mentioned above were, as regards the discharge, unimportant, and with regard to the gonococci, *nil.* In cases treated with nitrate of silver the injections, though this is contrary to what is mostly taught, are not to be left off if complications (especially epididymitis) arise, but as a matter of fact, this mode of treatment is found to be the best for preventing complications. Thus, in 1,200 cases of gonorrhœa treated at the Breslau Klinik, there were 164 of epididymitis, the cord being also affected in 27 of them. But in 142 of these the epididymitis was already present when the patient came under treatment, leaving only 22 in which it occurred during treatment. Fourteen of these were out-patients, and eight were in-patients. Of the latter, one was under treatment by copaiba, two were using injections of thallin, one was using chloroborate of soda, and four zinc, lead or tannin. Of the out-patients, one was using resorcin, one naphthol, one nitrate of silver, and eleven were injecting solutions of zinc, lead, or tannin. In the only case in which epididymitis came on during the use of nitrate of silver injections, there had been some carelessness on the part of the patient. Nearly all the other cases, it will be seen, occurred during the use of injections of insufficient anti-parasitic powers. Besides epididymitis, particulars in regard to some other complications of gonorrhœa are also given. The total number of cases treated with nitrate of silver was 318, and in 237 of these the anti-bacterial action of the solution was proved by the microscope, without which instrument, indeed, the author considers the rational carrying out of treatment to be impossible. The paper also contains a report of the cases arranged in tabular form.

ARTHUR COOPER.

ARTICLE 197.

BROOKE ON THE CONTAGIOUS NATURE OF SYCOSIS.*

HAVING drawn attention to the want of success attending sycosis, which he attributes to the want of knowledge, to a large extent, of the true cause of the various diseases presented under this name, and also having taken exception to the division in the text-books of sycosis into parasitic and non-parasitic, the author proceeds as follows:—

In cases of tinea sycosis the parasite is of such easy demonstration that the affection is at once readily distinguished from the bulk of other morbid conditions of the hairy skin of the face, and has enjoyed a separate and distinct existence since the days of Malinsten and Gruley.

The other form, which may be briefly defined as an inflammatory affection of the same regions, characterised by the presence of pustules pierced by hairs, has been, until recently, regarded either as a form of eczema, or a peculiar inflammation of the hair follicles of unknown origin and relationship. Hebra drew a clear line between the condition which was due to the presence of the tricophyton, and that growth of papular tubercles, and pustules of the hair follicles first described by Bateman under the term sycosis. He ridiculed Köbner's statement that "folliculitis barbae" was occasionally parasitic; and he impugned even the existence of any form of sycosis parasitica as apart from ringworm. From a clinical point of view, however, the indications were very different. Amongst the male patients of any skin department or hospital, many present themselves with a pustular condition of the hairs of the face, which they assert they have acquired at the barber's shop. The frequency with which this history was given, and the circumstantial detail with which it was supported, attracted my attention some years ago, and gave rise to a suspicion, which has since become a conviction, that true sycosis may be acquired by contagion, and that the division of sycosis into parasitic and non-parasitic is not a correct one.

The disease presents itself at first in the form of bright acutely red papules, or small tubercles, round the hair follicles, accompanied, or immediately followed, by the formation of pustules. It affects almost exclusively those who frequent the lower class barbers' shops, where no great amount of care is exercised as to the cleanliness of the utensils, the barber's boy passing directly from one customer to the other with his lather brush. As the barber's razors are kept with a far better edge, usually, than those used by the majority of self shavers, the theory of the causation of the disease by the use of blunt razors can hardly hold ground. The condition which is actually caused by the use of blunt razors is confined to the development of red papules, which occur mostly on the tender loose skin of the submaxillary region and neck.

The history of the cases is singularly uniform. The most typical are those of workmen who are shaved but once a week—on Saturday night or Sunday morning. On Tuesday or Wednesday they notice a localised redness and slight irritation with the formation of pustules. By far the most frequent point of origin is amongst the group of thick hairs immediately below the lower lip, which the barber is in the habit of shaving up rather vigorously. The after course varies in different individuals. If irritated it may spread quickly, but if left alone it may remain confined to the same spot for a long period. At times the pustules predominate, and this is especially the case in the more acute forms; otherwise, the inflammatory infiltration of the skin papules round the hair follicles, or the patches formed by their coalescence, are the more prominent features.

The author having drawn attention to the sycosis menti of Bateman, being well known by barbers as an infectious disease, and that they drew a very clear distinction between the circinate form assumed by ringworm in its early stages, and the very different and irregular patches of early sycosis, proceeds as follows:—It has been for some time well known that furunculosis was caused through the invasion of the corium by pus-cocci, the staphylococcus pyogenes cereuset, et albus (which are the inciters of panaritum, ulcerative endocarditis, acute osteo-myelitis, acute abscesses, and purulent phlegmona); but no investigation had been made as to the etiology of the smaller and superficial pustules, which were frequently formed in conjunction with the furuncles. Hebra had denied to these accompanying lesions anything symptomatic more than a significance; but Erasmus Wilson—and in this both Bohn and Bockhart support him—asserted that they were not merely secondary, but might constitute a disease by itself. This disease, for which he reserved the use of the term impetigo, is characterised by an eruption of primary pustules on various parts of the body, quite independent of any previous development of papules or vesicles. These pustules, when occurring on the open skin, may be bored through by hairs or not; but when the process reaches the hairy parts, it takes on exactly the appearance and course of an ordinary sycosis. Both boils and abscesses occur as occasional accompaniments of the pustules, and individual pustules may be observed to transform themselves directly into either of these two forms of lesions.

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* *British Journal of Dermatology*, December, 1889.

Bockhart has demonstrated by cultivation, inoculations undertaken on his own arms, and by microscopic examination of pustules thus formed, that the lesions originate round either the hairs or sweat glands as centres, and that they are caused by the presence and action of the two forms of staphylococcus. He was induced by the very palpable resemblance of these pustules with those found in sycosis, to investigate the etiology of this latter affection in the same manner. The examination revealed the presence of the same staphylococci as in impetigo. He found, moreover, that if he made the inoculation of the cocci with a lancet, on skin which had been previously scraped with a scalpel, that the lesions were somewhat more intense than usual, and more disposed to form abscesses and boils; whereas, if simply rubbed in with the finger they produced merely a local crop of pustules round both the hair and the sweat ducts.

The pus-cocci are known to be of wide distribution, but the frequency of their occurrence on the normal skin had hardly been anticipated, until Bockhart demonstrated it by actual cultivation. He found either one or both beneath the dirt of the finger nails, in one case out of six, in healthy individuals, and in three out ef eight scrapings from the surface of the body of eight healthy individuals; and he showed that they were present in large quantity in the mucus of the nose of an individual who was suffering from chronic rhinitis and sycosis of the upper lip.

Dr. Brooke next alludes to how mysterious it is that more people are not affected by scratches and inoculation, the only explanation being some predisposition of the individual affected. He then draws attention to how an eczematous surface may become affected with sycosis, and thus lead to a differential diagnosis between it and pustular eczema.

Seborrhœa is occasionally connected with both recent and chronic cases of sycosis, and its manifestations were distinctly aggravated in the neighbourhood of the sycotic pustules.

MORGAN DOCKRELL, M.A., M.D.

ARTICLE 198.

COLELLA ON INFANTILE SPINAL PARALYSIS IN RELATION TO THE MOTOR CENTRES OF THE HEMISPHERES.*

DR. COLELLA has published a most careful study on this question. This paper is illustrated with some beautiful lithographs. The author has carefully studied the literature of the subject, and his *resumés* of what has been done by previous inquirers fill many of his 76 pages. At the same time, even granting that this was advisable or necessary, his article seems too long. The case which he himself has observed was a man of 59 years of age, who had suffered from epilepsy from infancy, with paralysis of the right leg, the knee stiff and deformed. He had the violent character common to epileptics which had brought him into the grasp of the law, and he had passed 17 years in the galleys for different homicides (*per diversi omicidii*). Coming into the asylum of Naples in 1881, he died of gangrene of the lungs in 1887. The physicians of the asylum had thus plenty of time to make very careful observations and measurements which are given in much detail. The clinical diagnosis is thus summed up: Epilepsy and post-epileptic dementia, spinal paralysis and infantile atrophy, talipes varo-equinus with arrest of development, deformity and paralytic contraction of the right leg. In the atrophied limb there was abolition of voluntary movement, disappearance of the deep and superficial reflexes, electrical reaction of the muscles of the leg and feet, but the reaction of regeneration in those of the thigh, and atheromatous degeneration of the aorta. The pathological examination was most carefully made. There was hypertrophy of the left ventricle of the heart, and fatty and calcareous degeneration of the aorta. There were also the usual lesions accompanying gangrene of the lungs, enlargement of the liver and of the spleen, and hyperæmia of the kidneys, with fatty degeneration of the cortical substance.

The brain was found to be well developed and symmetrical. It weighed 1,270 grammes. The right hemisphere was slightly heavier than the left one. The colour and consistency of the nerve tissues and vessels appeared to be normal with one exception. There was a deficiency or depression affecting the median convolutions answering to the motor cortical zone of the lower extremities on both sides. The locality is very carefully defined in the text, and indicated on the plates. The brain and cord were hardened in Müller's fluid for microscopical examination. The parts answering to the motor zone for the leg were found to be atrophied. The atrophy was greater on the left hemisphere than on the right. There was atrophy and sclerosis of the right anterior horn of the lower portion of the spinal cord. There was also degenerative atrophy of the muscles of the motor nerves and of the anterior spinal roots of the nervous plexuses of the right leg.

Colella considers that the primary lesion was the degeneration of the lumbar region of the spinal cord. This, on microscopical examination, was found to be due to atrophy of the lateral pyramids of the cord on the right side, and bilateral atrophy of the marginal zone of the lateral columns in the lumbar portion of the cord. The lesion of the spinal cord was succeeded by wasting of the motor centres of the leg. That this wasting took place on both sides of the brain when only the right leg was affected, he considers to be owing to the movements of the lower extremities being more associated than those of the upper extremities. The motions of the arms are more specialised, and hence they are more completely represented by the opposite side of the brain, while the associated movements of the leg are excited from centres common to each hemisphere. Dr. Colella observes that the motor zone in the cortex does not represent a motor centre geometrically circumscribed, but a centre of greater functional activity, from which it derives the greater of its motor innervation.

Dr. Colella gives a *resumé* of published cases in which loss or congenital absence of limbs were found, after death, be to accompanied by a deficiency in some corresponding portion of the brain. These instances, though collected from a wide survey of medical literature, are, nevertheless, scanty; and it ought to be borne in mind that a good many negative instances have been noticed, and a few of them have been published—that is to say, instances in which limbs have been wanting from infancy with no marked deficiency of those portions of the brain regarded as corresponding motor centres.

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* *La Psichiatria*, anno vii., fasc. 1-2. Naples: 1889.

Dr. Colella thinks himself warranted in presenting the following conclusions: (*a*) The complete atrophy of the terminal peripheral organ supervening in the early years of life brings with it the arrest of development of the corresponding centres of the cortex, and the ascending atrophy of the bundle of gomers in the spinal cord. (*b*) The aplasia of the motor centres of the cortex and the production of simple secondary atrophy descends from the efferent fibres, which connect the central organ (the brain) with the atrophied peripheral organ (the spinal cord), and also of these nerve fibres originating from one centre and bilaterally distributed. This atrophy occurs on either or both sides in the proportion of the functional activity of the hemispheres called into action.

W. W. IRELAND.

Anatomy and Physiology.

RECENT PAPERS.

199. MACKENZIE, DR.—On Anomalies of the Uvula. (Johns Hopkins Hosp. Reports, vol. ii., No. 1, p. 32.)

200. ISRAEL, DR.—On Hereditary Cleft of the Lobule of the Ear. (*Virchow's Arch.*, bd. 119, s. 241.)

201. TAGUCHI, DR.—On the Suprasternal Space. (*Arch. fur Anat. und Entwick.* Jahrg. 1890, hft. i. and ii. s. 1.)

202. WAGNER, DR.—On the Ending of the Dural Sac in the Human Spinal Canal. (*Arch fur Anat. und Entwick*, Jahrg. 1890, hft. i. and ii. s. 64.)

203. DELITZIN.—On the Positions of the Organs in Different Movements of the Neck. (*Arch fur Anat. und Entwick*, Jahrg. 1890, hft. i. and ii., s. 72.)

ART. 199. *Mackenzie on Anomalies of the Uvula, with special reference to Double Uvula.*—The author describes the following varieties of double uvula. *First variety*, in which there are two separate and distinct uvulæ hanging apart on either side of the median line of the palate. *Second variety*, in which there is no central uvula, but two lateral ones, each projecting from the soft palate at, or in the neighbourhood of, the junction of the anterior and posterior faucial pillars and directly over the tonsils. *Third variety*, in which there is one well-formed lateral and externally deflected uvula, its fellow on the opposite side being represented by a mere rudimentary teat, springing from the palate at its junction with the palatine fold. *Fourth variety*, in which there are two central uvulæ joined only at their insertion into the palate. *Fifth variety*, in which there are two central uvulæ joined only at their insertion into a sort of hemispherical bulging downward of the central portion of the soft palate.

200. *Israel on Hereditary Cleft of the Lobule of the Ear.*—The subject of the comparatively unimportant cleft of the ear-lobule has recently become of great interest, since opponents of Weismann's views, as to the inheritance of acquired effects, have brought forward cases as examples of the inheritance by the child of a mutilation, artificially produced in the parent. Dr. Israel describes two cases of the condition: (1) That of his own daughter, whose otherwise well developed ear has a cleft dividing the lobule into a larger anterior and a smaller posterior portion. At the upper extremity of the cleft there is a small round projection not quite the size of a hemp-seed. (2) The appearances are very similar, the individual in this case being an adult female, in the other a child. The malformation is, he thinks, a typical deviation from normal development, since its position is definite. This position is that occupied by the cleft known in the embryo as the sulcus intertragicus. The existence, therefore, of such a cleft in the child of a parent with a torn ear-lobe would only be a coincidence.

201. *Taguchi on the Suprasternal Space.*—The author deals in this paper with the space which exists in the neck between the layers of the fasciæ. His investigations were carried out by two methods; (1) by the use of the so-called hectograph mass as a warm injection; and (2) by the use of Japanese ink as a cold injection. He concludes that a very large interfascial space exists above the sternum, whose size and shape can be exactly made out by injections; and, further, that this space is larger in young persons than in old, being quite extraordinarily large in children. He has not found it to be the case, as others have stated, that the superficial layer of the cervical fascia arises from the interclavicular ligament. According to his observations it arises in the central region of the neck from the anterior surface of the manubrium between the origins of the sterno-mastoid muscles, and at each side from the origins themselves. In the region of the fossa supraclavicularis minor, it arises from the anterior part of the sterno-clavicular articulation, and the sternal end of the clavicle, if the sternal origin of the sterno-mastoid be separate from the clavicular; it then surrounds the clavicular origin of the muscle and springs in the lateral region from the upper border of the clavicle. The deep layer (lamina media, Tillaux) arises in the tracheal region from the posterior surface of the manubrium, sometimes from the anterior point of origin of the sterno-hyoid and thyroid muscles, sometimes as a process of the anterior part of the pericardium, and then from the hinder point of the origin of the same muscles. In the carotid region it arises from the hinder part of the sternal end of the clavicle, and from a part of the cartilage of the first rib, from the hinder part of the sterno-clavicular joint, and in the lateral region from the back of the clavicle. Upwards the superficial part forms, in the carotid region, the sheath of the sterno-mastoid muscle; in the lateral region, a kind of processus falciformis, and there unites first with the deep portion, which in the tracheal region forms sheaths for the sterno-hyoid and thyroid muscles, along which it ascends in front of the trachea and inferior thyroid veins. In the carotid region the superficial layer lies in front of the sheath of the great vessels of the neck; in the lateral region in front of the subclavian artery and vein, and bounds with the deep layer the above-described suprasternal space.

202. *Wagner on the Ending of the Dural Sac in the Human Spinal Canal.*—The author endeavours to settle the question as to the extent of the dural sac, by the method of injection. The shape of the end of the sac is similar to that of the conus medullaris, viz. a blunt cone; which shape can also be made out by careful dissection. As a result of his examination of 20 children, he states that he found the termination: At the middle of the second sacral vertebra in 10 per cent., at the end of the second sacral vertebra in 10 per cent., at the beginning of the third sacral vertebra in

65 per cent., at the middle of the third sacral vertebra in 10 per cent., at the end of the third sacral vertebra in 5 per cent. In the first year of life, then, the upper part of the third sacral vertebra appears to be the normal place of ending. His observations on adults had the following results:—No. 1, male, æt. 25, 2nd sacral vertebra, upper. No. 2, female, „ 60, 2nd sacral vertebra, middle. No. 3, female, „ 36, 2nd sacral vertebra, lower. No. 4, male, „ 36, 2nd sacral vertebra, lower. No. 5, female, „ 50, 2nd sacral vertebra, lower. So far as these observations go, it appears that the sac descends somewhat lower in children than in adults. As a practical point for surgeons, he notes that the opening of the dural sac by removal of either of the lower sacral vertebræ is not an occurrence to be feared, but that removal of the third and especially of the second, must be carried out with great care to avoid wounding the end of the dural sac, which is only to be recognised with difficulty.

203. *Delitzin on the Positions of the Organs in different Movements of the Neck.*—The author's conclusions are thus summarised:—Movements of the neck exercise, without doubt, an important influence upon the organs of all systems contained in it. Not only the atlas but also the other upper cervical vertebra are twisted when the head is turned. In the system of air tubes the shifting is not confined to the hyoid, but is to be observed as far below that as the upper aperture of the thorax. Thus the larynx and trachea are moved in a corresponding manner, and the pharynx and œsophagus follow them. The great vessels of the neck move in almost their entire extent, and this refers to the common carotid as well as to its branches; these move with the above-named structures. In extension of the head the bifurcation of the innominate artery moves upwards, and in flexion downwards and to the right. Only in absolutely normal positions of the neck can the carotid tubercle be regarded as an absolutely reliable guide to the common carotid artery. The sterno-mastoid muscle quite clearly shifts in movements of the head, since it glides over cervical vertebræ, larynx, and the vessels of the neck. Its anterior border is only within certain limits of value as a guide to the carotid artery. The total of all the movements of individual organs gives a topographical figure (on section of the neck) which differs little from the normal. The shiftings of the neck-organs have a characteristic appearance for each single movement of the head. In all movements of the head the shifting of the organs in the upper part of the neck is much greater than in the lower, where many subordinate influences (*e.g.*, the size of the lobes of the thyroid body) take effect. The parts lying at the periphery of the neck undergo much greater shiftings than those at the centre. In twisting of the head the former describe an arc of a greater circle than the latter and glide over them; the sterno-mastoid over the artery, the artery over the vertebral column. *Cæteris paribus* the amount of shifting depends upon; (1) the form, thickness, elasticity, etc., of the parts moved; (2) the amount of extensibility of the ligaments connected with the individual parts; (3) the amount of development of the fasciae and aponeuroses uniting the various systems of organs together; (4) the amount of deviation of the head from the normal position.

Bertram C. A. Windle, M.A., M.D.

The Surgeoncy of Simpson's Hospital for Old Men, Dublin, was filled by the appointment of Dr. Charles Bent Ball, of Sir Patrick Dun's Hospital. There were three candidates, and the salary of the office is £25 a year.

Surgery.

RECENT PAPERS.

204. **Trosier**, M.—On Aspiration in Pneumothorax.

205. **Ramsay**, Dr. A. L.—On Pulmonary Surgery. (*Annals of Surgery*, Jan. 1890.)

206. **Keyes**, Dr.—On Nephro-Lithotomy. (*Med. Rec.*, No. 6, 1890.)

207. **Tiffany**, Dr.—On the Expediency of Operating at One Sitting upon the Bladder and Kidney (*Amer. Journ. of the Med. Sciences*, Jan. 1890.)

208. **Verneuil**, M.—On Spontaneous Fracture in Tabetic Subjects. (*Gaz. des Hopitaux.*)

209. **Harrison**, Mr.—On the Treatment of Common Disorders of the Urethra. (*Prov. Med. Jour.*, Feb., 1890.)

210. **Parke**, Dr. T. D.—On a Case of Ligation of the Left Subclavian in the third portion for Traumatic Aneurism of the Axilliary Artery. (*N. Y. Med. Rec.*, Feb. 15, 1890.)

211. **Mynter**, Dr. H.—On a Case of Extensive Cirsoid Anuerism of the Scalp obliterated by Multiple Ligatures. (*Annals of Surgery*, Feb. 1890.)

212. **Lenn**, Dr.—On the Implantation of Decalcified Bone. (*Amer. Journ. of the Med. Sciences*, Feb. 1890.)

213. **Deaderick**, Dr. C.—On a case of Rupture of the Quadriceps Femoris Tendon, with Dislocation of Patella beneath the Intercondyloid Groove of the Femur. (*Ann. of Surg.*, Feb, 1890.)

214. **Baker**, Mr.—On Whitlow. ("Bartholomew's Hospital Reports.")

Art. 204. *Trosier on Aspiration in Pneumothorax.*—M. Trosier relates a case of a woman aged 27 who came under his care in June, 1887, suffering from a violent attack of spasmodic asthma, to which she had been subject from the age of 19. From this attack she recovered and subsequently had two other attacks, and on July 1, 1887, the patient was found to have pneumo-thorax of the left side, which had arisen without any dyspnœa, and therefore gradually. With Potani's aspiration, M. Trosier drew off about two and a half litres of air, and the remainder of the effused air was re-absorbed on the following day. Since this the patient has had several paroxysms of asthma with no return of the pneumo-thorax. Emphysema was present. M. Rendu relates a case of whooping cough in which pneumo-thorax occurred, and in which great relief was given by puncturing. Mr. Waller, in the *Lancet*, Feb. 8, 1890, relates the case of a youth aged 16 years, in which pneumo-thorax occurred without any definite cause, in which the chest was punctured and a considerable quantity of air came out. The patient subsequently recovered, the lung regaining its normal position. [These cases show the value of aspiration in cases of pneumo-thorax occurring in asthma, whooping cough, and in conditions where the lung is, comparatively speaking, healthy, while aspiration cannot be recommended as being of much value in the majority of cases of pneumo-thorax which occur in a phthisical lung, while in exceptional instances such may be of value.—*Rep.*] **Francis Hawkins, M.D.**

205. *Ramsay on Pulmonary Surgery.*—Dr. A. C. L. Ramsay, of St. Cloud, U.S., contributes a paper, with reports of four cases of pneumotomy. In the first

case, which was one of gangrene of the right lung consequent on pneumonia, a little more than one inch of the seventh rib was excised in the axillary line, and the pulmonary cavity then opened and drained. The cavity closed rapidly, and the patient was discharged at the end of six weeks, and when last heard of by Dr. Ramsay was working in perfect health. This is followed by a case of abscess of the lung with pyro-pneumothorax due to gun-shot wound, in which the patient made a good recovery after excision of portions of third, fourth, fifth, sixth, and seventh ribs. In the third case, pneumotomy performed for multiple abscess, following measles, in a subject of tuberculous family, had no good result, and was followed, after an interval of two months, by death from septicœmia. In the last case, an abscess of the lower lobe of the right lung, following typhoid fever, was very successfully treated by pneumotomy, preceded by excision of portions of the third, fourth, and fifth ribs in the axillary line.

206. *Keyes on Nephro-Lithotomy:*—In a paper read at Albany, at the meeting of the Medical Society of the State of New York, Dr. E. L. Keyes, of New York, reported six cases of renal surgery in his own practice, including one remarkable instance of successful nephro-lithotomy, in which a large and much branched phosphatic calculus was removed from the left kidney. In his comments on these cases, Dr. Keyes holds that nephro-lithotomy, when performed in the lumbar region, is not such a serious operation as is generally considered. In six cases in which this surgeon has thus explored the kidney for stone, the patients did perfectly well, and made prompt recoveries as far as the operation itself was concerned. With regard to the anterior and abdominal operation performed and advocated by Mr. Knowsley Thornton, it is held by Dr. Keyes that though much may be said in favour of this method by those who are very familiar with peritoneal surgery and antiseptic abdominal exploration, still, an extra element of work is inflicted upon the patient by opening the peritoneum, and the operation is not generally necessary or justifiable. The author sums up with the following conclusions: "(1) The posterior exploratory incision upon a kidney suspected to contain stone is devoid of any serious danger when performed with proper care, and should be resorted to more frequently than is at this date sanctioned by general surgical opinion. (2) The best incision is the transverse one, below the twelfth rib, with as much of a liberating incision downward along the line of the edge of the quadratus as may be required to gain further space. (3) The kidney may be freely incised, and rudely lacerated with the finger, when the stone needs it, without producing any hemorrhage which hot irrigation will not control. (4) It is better, in the case of a large branching calculus, to break it up and extract it in fragments, rather than to attempt to remove it entire. (5) So little danger attends the posterior incision, that it seems wiser to make it always the first step, reserving peritoneal exploration for a later resource in cases in which the posterior exploration has miscarried."

207. *Tiffany, on the Expediency of Operating at One Sitting upon the Bladder and Kidney.*—Dr. Louis M. Tiffany, of the University of Maryland, has recently reported a case in which nephrotomy and lateral lithotomy had been performed at one sitting. The patient, aged 56 years, was found, on examination of the bladder, to be suffering from a calculus in this organ, and at the same time gave a clear history, and presented well-marked symptoms of suppurative pyelonephritis on the left side. Dr. Tiffany opened the left kidney through the usual incision in the loin, evacuating about an ounce of pus, and then removed from the bladder by lateral lithotomy. Intense shock followed this double operation, but the patient after a time did well, and at the end of four weeks was discharged. About five months later he was quite well, and able to attend to his occupation. Both wounds were then healed, and the urine, which was passed in a full stream was acid, and did not contain any pus. In his comments on this case, Dr. Tiffany points out that simple nephrotomy would have left an inflamed bladder containing a stone, and regurgitation of pus and urine through the dilated ureter and the lumbar would probably have occurred. On the other hand, to have removed the stone from the bladder, leaving a suppurating kidney, would have exposed the patient to the serious risk of general sepsis. In this dilemma the idea came to the author of doing both operations at one sitting, and in this way of relieving both organs. Perineal lithotomy was practised in preference to litholapaxy, on account of the rapidity of the cutting operation, and of the means thus afforded of ensuring complete removal of the stone and absolute rest of the bladder with free drainage. The good results obtained in this case have led Dr. Tiffany to think that nephrotomy may be resorted to as a means of preventing the occurrence of diffuse suppuration. In this case the formation of multiple renal abscess might have been expected if the bladder only had been operated on and the kidney neglected; yet, after free incision of the kidney, no such untoward event took place. Reference is made to a case of old stricture, and another of malignant tumour of the bladder, in which operative interference was followed by fatal suppuration in the kidney, which, it is thought, might have been prevented by nephrotomy. In conclusion, it is suggested that in long standing disease of the urinary organs, such as is liable to induce the clinical condition known as surgical kidney, it might, when it is found necessary to operate on the bladder or urethra, become the duty of the surgeon to investigate the state of the kidneys, and if there be found such a morbid condition as is liable to induce diffuse suppuration or multiple renal abscess, then at the time of the urethral or bladder operation, to resort also to nephrotomy.

208. *Verneuil on Spontaneous Fracture in Tabetic Subjects.*—M. Verneuil directs attention to a case under his care of painless bi-malleolar fracture in the leg of a tabetic woman. This surgeon objects to the term spontaneous and prefers that of pathological fracture, as no bone would break unless submitted to pressure or blows from without, or to strong muscular contraction. Fracture in tabetic subjects occurs most frequently in the lower extremity, whilst in other forms of general osseous fragility, it occurs with equal frequency in both the upper and lower limbs. In tabetic fracture the larger bones are more frequently broken. In 38 collected cases the fracture occurred seventeen times in the femur, ten times in the bones of the leg, six times in the bones of the fore-arm, and thrice in the clavicle. In nearly 50 per cent. of cases of tabetic fracture more than one bone is broken, the number varying from two to eight. In consequence of the usual absence of pain, the fracture of tabetic subjects is often overlooked. Notwithstanding advanced pathological changes in the osseous structures, this form of practice, especially

when involving the diaphysis of a long bone, consolidates quickly, and with the formation of abundant callus.

209. *Harrison on the Treatment of Common Disorders of the Urethra.*—Mr. Harrison contributes some observations on the treatment of chronic disorders of the urethra. In cases of gleet it is wonderful what can be done by perfect douching with simple cold water. The best way of applying this is by means of a syphon apparatus made on the principle of Thudichum's nasal douche; in the reservoir about six ounces of water should be placed, or a solution of sulpho-carbolate of zinc (two grains to the ounce), and the meatus of the urethra should be compressed, while the urethra is being irrigated with the solution, so that the fluid is forced into the various lacunæ of the urethra. This method of douching the urethra is capable of extension to other conditions, when it is necessary to bring the canal under direct medication. There are other discharges—prostatic, seminal, and mucous—which are often maintained by an unhealthy state of the urethra, and for such of these as require local treatment the irrigation will be found most beneficial. In cases of orchitis, where the infection has proceeded from the urethra, as in gonorrhœa, the deep urethral irrigation with a solution of perchloride of mercury (1 in 10,000) is most effective in shortening and moderating the attack. The author remarks that he has found cocaine of great value as a local application in connection with small operations on the urethra, such as the passing of catheters and bougies, the stretching and dilating of strictures, and the management of various forms of prostatic obstruction where mechanical treatment is a necessity.

210. *Parke on a Case of Ligation of the Left Subclavian in the third portion for Traumatic Aneurism of the Axilliary Artery.*—A labourer, aged 40, was wounded by a pistol ball, the ball entering the posterior and inner surface of the arm at the fold of the axilla, and causing immediate loss of motion in the arm. The location of the ball could not be ascertained. Three weeks after the accident, the patient noticed a small tumour under the pectoral muscles, which caused pains radiating over the heart, and difficulty in breathing. Two days after the author discovered a pulsating tumour, the size of an ordinary egg, with distinct bruit on left axillary artery. The patient was removed to the Charity Hospital, and on the following morning the author ligatured the left subclavian in the third part of its course. The clavicle was raised, and it was only after a tedious dissection through the infiltrated tissues that the artery was isolated and tied with a silk ligature, no proper catgut being obtainable. The patient was removed to bed with the arm enveloped in cotton, and hot cans were placed in apposition. The arm was cold, but by the next morning was the warmer of the two. The dressing was changed on the sixth day, and pulsation, though extremely feeble, was felt in the radial on the third after the operation. No pain was complained of, except some discomfort referred to the elbow, which had existed from the first. Sensation to touch was entirely absent in the arm prior to, and for more than ten days after, the operation, and then gradually returned, never, however, to be complete. Subsequently movement became possible in the fingers, and the arm could be raised a few inches from the side, due to action of the deltoid. Massage and faradisation were employed intermittently, due to apathy of the patient, but little improvement followed their use. The aneurism having disappeared, the situation of the ball was made out in the neck, immediately in front of the anterior border of the trapezius. The missile was removed, much to the patient's relief.

211. *Mynter on a Case of Extensive Cirsoid Aneurism of the Scalp obliterated by Multiple Ligatures.*—The patient was a married woman, aged 43, formerly much addicted to drink. Eight years previously to admission into the Buffalo Hospital, while creating a disturbance under the influence of alcohol, she was forced to the floor, and to stop her noise received a slight slap in the face. On recovering from the alcoholic excess, her right forehead was reddish, and the arteries in that region were pulsating more than normal. The vascular dilatation increased, and at the time of admission the following condition of things was present. The right temporal artery, and especially its anterior branch, was greatly enlarged, extending in a tortuous way over the forehead. Here and there circumscribed dilations were seen, some as large as a hickory nut. Left temporal artery similarly affected, although less so; over, and anterior to the right ear, was a rather large pulsating tumour, formed from anastomoses with the posterior auricular and the middle temporal artery. A similar, though smaller tumour is seen over the right eyebrow, formed from anastomosis with the superior orbital artery; the right cheek has a nævus-like appearance, the conjunctiva of right eye is diffusely red from enlarged vessels. During the whole length of the tortuous arteries, grooves are felt in the bone, corresponding to the size of the artery, and produced by absorption of the bone on account of the pulsation. A distinct thrill was felt everywhere; the patient complained of heat and fulness in the face, and a loud pounding sound when she laid down; also of frequent profuse hæmorrhages from the right nostril. Under ether, the right external carotid was tied under the posterior belly of the digastricus; the murmur and thrill immediately dissappeared. The left temporal, and the enlarged arteries, were subsequently ligatured subcutaneously in eleven places with antiseptic catgut ligatures, which were introduced under the arteries by aid of a sharp pointed curved Hagedorn's needle. The silk ligatures were tied over pieces of thick drainage tubes, iodoform was freely dabbed over the parts, and antiseptic dressings were applied. The carotid wound at the time of the first dressing, seven days after the operation, was found to have healed by the first intention, the redness over the forehead had disappeared, the conjunctiva was almost of normal colour, the arteries had, more or less, all disappeared. No inflammation or sloughing at the seat of the subcutaneous ligatures; the drainage tubes were left in their places for a week longer. Three enlarged, but not pulsating arteries, in front of right ear, were then similarly ligatured, and the ligatures allowed to remain for 11 days. The patient was discharged from the hospital on the 21st day, with scarcely any traces of her disease.

212. *Lenn on the Implantation of Decalcified Bone.*—This is a subject which, under the able conductorship of Dr. Lenn, of New York, is making promising progress. He discusses the best means of closing large bone cavities, and gives a series of experiments in animals, upon the process of repair after implantation of decalcified bone. Dogs of various ages were submitted to experiment, first with a view to determine the usefulness of this implantation after trephining the skull, then, in cavities formed in the long bones. After injury or operation on the skull, he considers it

can be relied on as a measure well calculated to favour the reparative process, and to provide a firm, thick, unyielding cicatrix. After the experimental formation of bone cavities, it was found that the ossification proceeded consistently from the surface to the centre of the cavity, and without the implantation acting as a foreign body. He therefore extended his observations to the human subject, and gives the notes of ten cases in which he has used the decalcified bone for packing a bone cavity produced by disease, and scooped out and disinfected before being packed. These cavities were of various sizes up to that of a pigeon's egg, and were filled with plates of decalcified ox-bone which had been rendered asceptic by sublimate and by iodoform. The time occupied by the process of solidification was about one to two months, but the results were certainly better than are usually obtained. Care was taken to ensure capillary drainage by means of some absorbable threads, and when the bony implants had been forced into the cavities, it was maintained that any infiltration of blood between the fragments acted beneficially as a cement. Upon this point the author observes "that the packing answers the purpose of an antiseptic tampon, and furnishes the best medium for the growth and development of the tissue resulting from the regenerative process initiated by the trauma." One of the author's cases was that of excision of the knee with tubercular deposits on the head of the tibia. The tubercular material was scooped out and a cavity the size of a walnut left, which was packed with bone chips. There was firm bony union in two months, with complete healing of the wound. In commenting upon this subject in an interesting leading article, *the British Medical Journal*, of Feb. 13, observes that the healing of osseous cavity is, as a rule, performed by granulation tissue, though this takes a considerable time when the cavity is large. The introduction of a septic absorbable material, such as blood clot and decalcified bone, facilitates the healing, especially of the superficial parts of the wound. Osteoplastic flaps are more useful and rarer, especially for large cavities. These may be aided by bone grafts, when there is a paucity of bone in the neighbourhood from which the osteoplastic flaps may form.

213. *Deaderick on a Case of Rupture of the Quadriceps Femoris Tendon, with Dislocation of the Patella beneath the Intercondyloid groove of the Femur.*—The patient, a strong muscular youth of 19, while attempting to get into a train in motion, fell and dislocated the left patella. The bone was torn completely loose from its attachment above, and turned on its lateral axis three-eighths of a circle; its longitudinal axis forming an angle of about 45° with the tibia. A few hours afterwards, chloroform was administered and strenuous effort made to force the patella back into position. The author then related the difficulties which were experienced in effecting reduction—more than an hour was spent on the following day, the patient being under an anæsthetic, in the efforts to reduce the displacements, but without avail; subsequently a specially contrived small windlass was made for the purposes of traction upon the patella, and a force exerted powerful enough to have raised several pounds, still without effect. Then the author grasped the lateral edges of the patella with his left hand, drew it upward or away from the joint, pulled on the upper edge of the bone with his right hand in the direction of the axis of the thigh, and with a sudden jerk, the patella turned and fell into its normal position. With regard to the rarity of this form of displacement the author points out that Gross mentions that displacement downwards is altogether unpracticable, while in several large text books on surgery no reference whatever is made to its occurrence.

H. Percy Dunn.

214. *Baker on Whitlow.*—Mr. W. Morrant Baker questions the propriety of incising the sheath of the flour tendon in every case. It is held that the fact that a free exposure of the flour tendons by incision in cases of whitlow will, in most instances, be followed by their sloughing has not been sufficiently accentuated, and that the extreme importance of not incising the sheath has not been sufficiently recognised. If the theca be tightly distended and thick it must, the author grants, be opened; but if there be no distension or actually present inflammation of the sheath then, it is pointed out, the laying it open would resemble the laying open of a knee-joint, in the case of inflammation or suppuration around it, in order to prevent it from suffering damage. As a diagnostic point in the determining whether the inflammatory disease has already involved the tendon and its theca or not, the power, or the loss of it, on the part of the patient of placing voluntarily the desta phalanx of the affected finger whilst the second phalanx is fixed by the surgeon, is much insisted on. In the conclusions given at the end of this suggestive contribution on a very common, and often serious affection, Mr. Baker urges that, with reference to treatment, it is most important that thecal whitlow should be diagnosed from other forms of the disease which most closely imitate it, but in which the tendons and their sheaths are not essentially involved. The theca, it is held, should on no account be incised as a prophylactic measure, but only when the surgeon is assured of its being affected. In all cases of (presumably poisoned) wounds producing whitlow, in which there is room to believe that the original puncture or other injury did not involve the theca, the latter structure should not be assumed, without good reason, to be affected. In cases of true thecal whitlow it is recommended that relief should be afforded to the distended sheath by a comparatively small incision into it, over the head of the metacarpel bone or thereabouts, and not by a free incision exposing the tendons, along the palmar aspect of the finger.

Medicine.

RECENT PAPERS.

215. Düring, Dr. Von.—On the Rash in Dengue Fever. (*Monatsh. f. Prakt. Derm.*, vol. 10, No. 1.)

216. Babtchinsky, Dr.—On the Antagonism of Erysipelas and Diphtheria (*Journ. d'Hygiene, etc., St. Petersburg*, Feb. 1890.

Art. 215. *Düring on the Rash in Dengue Fever.*—Von Düring describes the rash of dengue fever as varying from a simple erythema to lichenoid papules and even large urticarial wheals. It most frequently occurs in the form of small papules, of a pale red colour changing to dark brown, and sometimes being as large as a pea. Sometimes large wheals are distributed amongst the small papules, and, in rare cases, the whole of the skin is covered with a deep red colour with occasionally slight oedema. The rash is of short duration, and desquamation begins on the fourth or fifth day in the form of very fine epidermic scales, and lasts mostly four to five days, but in some cases as long as two weeks.

216. *Babtchinsky on the Antagonism of Erysipelas and Diphtheria.*—The author's son contracted a serious form of diphtheria which threatened a fatal termination. Suddenly, and without apparent cause, the patient developed an erysipelatous eruption which seemed destined to determine death; but, as a matter of fact, in a few hours he began to mend, and soon after became convalescent. This observation encouraged the author to inoculate his next diphtheretic patient with the virus of erysipelas and the same marked improvement followed. Since then he has practiced these inoculations on a large scale, and in 12 out of 14 cases the result was perfectly successful. Moreover in the two fatal cases the inoculation had been ineffectual, *i.e.* sterrile, and the author regards the failure in these two cases as convincing as the success of the others. In another instance six children belonging to the same family contracted diphtheria, and five of them were inoculated with oculation of the erysepelas microbe. These five escaped and only the non-inoculated infant died. The author calls particular attention to the fact that in every case the inoculation only gave rise to mild symptoms, and the induced malady ran a short and uneventful course.

ALFRED S. GUBB.

Pharmacology and Therapeutics.

RECENT PAPERS.

217. WOOD Dr.—On the Therapeutics of Digitalis. (*Philadelphia Med. News*, Feb., 1890.)

218. FIELD, Dr.—On the Use and Abuse of Digitalis and Nux Vomica. (*Therap. Gaz.*, Jan., 1890.)

219. KNIGHT, Dr.—On Menthol in Laryngeal Phthisis. (*Journ. Amer. Med. Assoc.*, Jan., 1890.)

220. ATKINSON, Dr.—On the Oxytocic Action of Quinine. (*Amer. Journ. of Sciences*, Feb., 1890.)

221. HORSLEY, PROF.—On a Possible Means of Arresting the Progress of Myxœdema and Allied Diseases. (*Brit. Med. Journ.*, Feb., 1890.)

222. THORINGTON, Dr.—On Cocaine in the Treatment of Yellow Fever. (*Amer. Journ. of Sciences*, Feb, 1890.)

223. BUDDE, Dr.—On Boiled Milk as Children's Food. (*Deutsche Med. Zeitung*, Jan., 1890.)

224. LABORDE, M.—On the Iodides of Potassium and Sodium. (*Bull. Med.*, March 3, 1890.)

225. MAAR, Dr. — On Sterilised Milk in the Dyspepsias of Children. (*Mang. Diss. Erlanger* 1889. *Deutsche Med. Zeitung* Jan., 1890.)

226. GREEN, Dr.—On the Treatment of Nasal Diphtheria. (*Alleghany Co. Med. Soc.*)

227. LEWIS, Dr. — On the Administration of Santonin.

228. BENEDIKT, Dr.—On the Treatment of Spastic Infantile Hemiplegia. (*La Sem. Med.*)

229. MENDELSON, Dr. WALTER.—On the Physiological Treatment of Obesity. (*New York Med. Rec.* Feb. 15th, 1890.)

230. WATKINS, Dr. T. J.—On Enemata of Magnesium Sulphate in Intestinal Obstruction. (*Maryland Med. Jour.*)

231. RICHARDSON, DR. B. W., F.R.S.—On Galvanism and Resuscitation (*The Asclepiad*, No. 25, vol. vii., 1890.)

232. SPANTON, MR. W. D., F.R.C.S., Edinburgh.—On Iodate of Calcium as an Antiseptic. (*Med. Journ.*, p. 139, March, 1890.)

233. MERCK, DR.—On Exalgine or Methylacetanilid (*Deutsche Med. Zeit.*, Jan. 1890.)

ART. 217. *Wood on the Therapeutics of Digitalis.*—The condition of heart disease especially met by digitalis is simple dilatation or weakening of the walls of the heart. It acts specially upon the vulgus nerve. In hypertrophy digitalis does harm if the muscular walls of the heart be affected, but, when combined with valvular disease, great benefit ensues from its use. Some persons entertain the idea that heart disease means instant disablement: such is not the case. Dr. Wood quotes a case of an old man who died over 80 years of age, in whom extensive mitral disease could be dated back for years. In the reporter's own family a lady aged 97 has had similar extensive valvular disease, for more than half a century, to his own knowledge, yet is deficient only in her walking powers. Digitalis acts thus: by virtue of its action on the inhibitory nerve and, to some extent, by virtue of its action on the heart muscle, it quiets the heart. It makes the heart deaf to the impulses coming to it from all portions of the system; and, instead of 120 or 130 beats a minute, there is a pulse of 60 or 70 a minute; and during the long pauses the ventricle fills itself with blood. Now, when it comes to contract, it finds that it has within its embrace a great mass of blood which can be squeezed out through the aorta. So that, in the first place, it produces quiet in the heart, which is filled with blood that may be expelled; and when the contraction comes it is a great, powerful contraction, in which has been gathered up a force that previously was wasted in many different contractions. In aortic disease digitalis is harmful as a rule, because there is greater hypertrophy than in mitral diseases, but if properly used, is a remedy of great value in the treatment of the formative phase, so to speak, of heart disease and in convalescence. It regulates the heart's action, it causes the muscle to be well-fed, and it stimulates activity in that muscle. Its use, therefore, is of immense importance in building up activity in the heart structure, if there be any hope for the patient. In some chronic cases large doses (ʒj thrice a day) act marvellously; and several instances are cited to prove the fact that life could be prolonged up to a certain point; that digitalis steadied those hearts, stimulated them, built them up, brought them into that condition in which they were able to utilize the last grain of force that was remaining in the storehouse of their power, and to make use of that force until, at last, it was expended. When the last grain was gone, the heart stopped. Life had been prolonged, life had been made comfortable; death, when it came, came as the lightning shock. In aneurism digitalis is a dangerous remedy, as the following case illustrates:—A man came into a ward in a condition of collaspe, who had been picked up in the street in a dying condition, with a temperature far below normal and a pulse which was not preceptible. Dr. Wood said, "I do not know what is the matter with this man; give him digitalis and other stimulants." Digitalis was administered, and I saw the man two days afterward. As I stood by his bedside I felt the great, huge digitalis wave coming up under my finger, and I said, "Give this man no more digitalis," as his pulse showed unquestionably the effect of it. Suddenly the man, with a struggle, braced himself in the bed and threw himself forward. A great rush of blood came out of his mouth and he fell back—he was dead. I said at once to the resident physician, "Do you know what we have done? That man had internal aneurism, and we have burst it with digitalis." There was the aortic artery rent as though with human fingers; the digitalis had siezed upon it and torn it asunder. In cardiac dropsy digitalis is valuable, not as a direct stimulant to the kidney, but as a regulator of the circulation, and thus acts as a diuretic.

218. *Field on the Use and Abuse of Digitalis and Nux Vomica.*—Dr. Field contributes some practical notes on the use of digitalis and nux vomica. In nearly all text-books the dose of digitalis is much exaggerated. In the concentrated tincture of digitalis leaf we have the safest method of giving the drug; but very few patients can stand a larger dose than five minims of this tincture three times a day after meals. If the remedy be pressed further, there is almost sure to be evidence of a more or less tetanized heart. In the author's experience, this drug is most useful when applied to the subject of a "weak and irritable heart," met with in those of full adult age, who have been overworked, or overburdened by business. In these cases, a dose of five minims given three times a day, and continued for some weeks or even months, produces a wonderful effect. Digitalis is *not cumulative;* the system responds to it as freely after three months use as it did at first. With reference to the use of nux vomica, the author states that it is not wise to use strychnine, as it is very insoluble, but a salt of the alkaloid should always be used, and for preference, the sulphate of strychnine is the best, and if this is used, no trouble can arise from the cumulative action of the drug. Many firms of chemists are in the habit of making up parvules of strychnine, containing as much $\frac{1}{20}$ grain; these are dangerous to give to patients, and now many firms have agreed not to use alkaloidal strychnine at all, but to employ the sulphate, or some salt of strychnine. Dr. Field concludes his remarks by giving a very good formula for an aperient pill: ℞ Aloin gr. $\frac{1}{3}$, strychnine sulph. gr. $\frac{1}{40}$, ext. belladon gr. $\frac{1}{10}$, pulv. ipecac. gr. $\frac{1}{2}$, one pill to be taken once, twice, or thrice a day, according to circumstances.

219. *Knight on Menthol in Laryngeal Phthisis.*—Dr. Knight gives his observations in about 20 cases of phthisis, in which laryngeal symptoms were treated with inhalations of menthol. This drug seems to have a peculiar sedative effect in tubercular laryngitis. Under its influence hyperæmia is diminished and secretion is lessened. In some cases cough and dysphagia are relieved. It may encourage a tendency to cicatrization, which is now and then witnessed in tubercular ulcers of the larynx, even without special treatment. The author states that he himself has never seen a tubercular ulcer of the larynx heal under the influence of menthol, but he has often seen a sloughy surface give way to apparently healthy granulations during the use of this drug. The best results are obtained in early cases when, without doubt, an improvement is very often noticed, if menthol is steadily used.

220. *Atkinson on the Oxytocic Action of Quinine.*—This is a very able and exhaustive paper on the action of quinine upon the pregnant womb in the human female and in animals. A large array of authorities for and against the oxytocic action of the drug is given, together with numerous cases in the human female and in bitches. In the *Medical Digest and Appendix,* sections 400-6, many observations are noted; and there it will be seen that some observers attribute a distinctly preventive power in cases of threatened abortion to the use of the drug. A large experience of malarial fever in Java convinced the reporter that in no case did quinine, though given in large doses, cause abortion. Dr. Atkinson then sums up a very instructive paper. In conclusion, the following propositions are submitted: 1. The cinchona preparations have not a fixed and definite influence in causing contractions of the uterus. 2. An oxytocic action is occasionally produced by these remedies. This action depends upon idiosyncrasy; and, as in the other idiosyncratic reactions to cinchona, it is impossible to foretell, in any given subject, its manifestation. 3. There is some evidence that this action is only exerted under large doses or in debilitated subjects. 4. Cinchona and its derivatives should be employed during pregnancy with great circumspection, and should be at once withheld upon the supervention of symptoms indicating a uterine-motor influence.

221. *Horsley on a Possible Means of Arresting the Progress of Myxœdema and Allied Diseases.*—Prof. Victor Horsley contributes a very interesting article on a possible means of arresting the progress of the diseases know as myxœdema, cretinism, cachexia strumipriva, etc. Attention is drawn to a recent paper by Dr. Von Eiselsberg, in which he repeated and extended Prof. Schiff's observations on the effects of transplantation of the thyroid gland into the peritoneal cavity. Prof. Schiff found that in dogs "thyroidectomy loses its danger, and an essential amount of its effect, if one previously introduces and fixes in the abdominal cavity other thyroid glands from an animal of the same species." Dr. Von Eiselsberg describes a number of similar experiments. In nine animals the left thyroid gland was extirpated, the lobe kept warm in normal saline solution, and quickly transplanted, either into a fold or messentry, or into the sub-peritoneal tissue. At dates varying up to three weeks the other half was removed from the neck. Eight of these animals died of typical symptoms of loss of the thyroid, and on *post-mortem* examination, showed that the transplanted gland had not grown *in situ.* The ninth animal, however, survived, and increased in weight; it was killed, and a *post-mortem* examination revealed that the transplanted gland had become organised and fully vascularised, and in no way degenerated. In four more cases the transplanted gland was placed between the fascia and the peritoneum. In one of these the animal grew, and was killed three months and a half afterwards; on *post-mortem* examination the gland was found in functional activity in the abdominal wall. These results show conclusively that the transplanted gland, if it can be got to live after the grafting, will, in its new situation, provide for the needs of the body as well as if it were in the neck, and, consequently, saves the life of the animal. These experiments suggest to Prof. Horsley the possibility of relieving such diseases as myxœdema, etc., by transplanting thyroid tissue into the patient. The most difficult question to solve is to find out what kind of gland would be best for this purpose. Doubtless one from an anthropoid ape would be best, but the difficulty arises in always obtaining one when wanted. Prof. Horsley has shown that the thyroid gland of a sheep very closely resembles in anatomical characteristics that of man; and he proposes, when opportunity offers, to try transplanting a portion of the thyroid gland from the sheep, and if the operation failed to produce any improvement in the symptoms of the disease in about three months, the operation should be repeated. The best evidence of success would be an improvement of the anæmic phenomena.

222. *Thorington on Cocaine in the Treatment of Yellow Fever.*—After seven years failure to treat yellow fever successfully, Dr. Thorington tried cocaine in doses of

half to one grain every half hour or hour, and in bad cases every 10 minutes. The action as a diuretic, heart tonic and anti-emetic. The wonderful control the drug appears to have in arresting emises is marked, and aids greatly the injections of food and other remedial agents. Dr. Thorington thus sums up its value: cocaine in the treatment of yellow fever, may be stated to be almost specific, in my experience doing more to cure this disease than any other drug I have ever tried, taking away or removing all nausea and vomiting, acting as a diuretic and has an excellent and sure "heart tonic and stimulant."

Richard Neale, M.D.

223. *Budde on Boiled Milk as Children's Food.*—The sterilisation of milk with Soxhlet's apparatus is, on the score of expense not likely to be adopted by the pour. Once boiling destroys, probably, pathogenic bacteria, but Hueppe has shown that this is not sufficient to destroy the micro-organisms giving rise to putrefaction. The milk must, therefore, be boiled again immediately before it is given to the child. And, in the same way, whatever is added to the milk (water, sugar, gruel, etc.) must be sterilised. Dr. Budde recommends that the milk should be boiled in a narrow-mouthed vessel, as there is then less evaporation of water, and a skim is not formed, which deprives the milk of a certain proportion of lime and albumen.

G. D'Arcy Adams, M.D.

224. *Laborde on the Iodides of Potassium and Sodium.*—At a recent meeting of the Academy of Medicine the author protested against the assumption that substances having a certain analogy with each other might with impunity be substituted one for the other for therapeutical purposes. He insisted that the therapeutical value of a given substance must be established by observations made with that particular substance and no other. He points out that formerly the bromide of potassium was tried in lieu of the iodide in the treatment of syphilis, but with disastrous results. The salts of sodium are, it is true, much less tonic than those of potassium, but, *en revanche*, their therapeutical value is correspondingly small. This holds good between the chlorates of potash and soda, but it is even more marked when the therapeutical effects of the iodide of potassium are compared with those of the sodium salt. He mentioned a recent case in which the sodium iodide in large doses had been given for some time without any benefit, in which the administration of the potassium iodide was promptly followed by relief.

Alfred S. Gubb.

225. *Marr on Sterilised Milk in the Dyspepsias of Children.*—Sterilised milk (Soxhlet's apparatus) given in dyspepsius, according to the author's observation in the *Erlanger Toli Klinik*, is as badly borne as ordinary milk. Milk, even when sterilised, is still a material capable of decomposition, and for that reason it favours the decomposition-processes present in the diseased digestion-tract. If, however, the bowel is freed from decomposing in gesta by the administration of evacuant (calomel), and the suspension for several days of milk, sterilised milk will afterwards be well borne and the dyspepsia improves.

G. D'Arcy Adams, M.D.

226. *Green on the Treatment of Nasal Diphtheria.*—Dr. Green gives two cases of nasal diphtheria in which the membrane was distinctly perceptible, and there were small patches of membrane on both tonsils which he treated in the following way:—He began with syringing the nose thoroughly with a solution of borax; he then plugged the nose as completely as possible with a tampon of absorbent cotton wool soaked in a solution of the bichloride of mercury, 1 to 1000 which was kept in for 24 hours and was repeated every two hours. Internally large and frequent doses of calomel were given. In the evening iodoform was applied, reduced with calcined magnesia. The next day no membrane could be seen in the nose. Hemorrhages occurred frequently but the membrane did not re-appear.

227. *Lewis on the Administration of Santonin.*—Dr. Lewis of Berlin thinks that as the action which one wishes to obtain in the giving of santonin is a local and not a general one, it should be given in its least soluble form. He suggests that it should be administered in some oil such as cocoanut oil, olive oil, cod liver oil or castor oil. Some of the ethereal oils which are so destructive to the lower forms of animal life would be a suitable adjuvant.

228. *Benedikt on the Treatment of Spastic Infantile Hemiplegia.*—Benedikt reports two cases of spastic infantile hemiplegia which affect the type of apoplexy or cerebritis, give a favourable prognosis when not complicated with symptoms of motor excitement. In cases where such symptoms do exist treatment of one extremity is capable of producing a favourable effect upon the functional activity of the entire organism. In spastic infantile hemiplegia which gives a grave prognosis, the patients are not able to use the affected extremity choreic movement of this extremity present functional activity of the other. In Benedikt's two cases nerve stretching was adopted. In the first the radial and cubital were stretched, in the second the cubital and median. The results of this operation were complete cessation of the choreic movements. In the first case the improvement has lasted five years and a half.

Francis Hawkins, M.D.

229. *Mendelson on the Treatment of Obesity.*—The aim of the physician in the treatment of obesity is, the author states, to so regulate the functions of the animal economy that the consumption of fat shall for a time exceed production. This may be accomplished by regulating the diet and exercise, bearing in mind that the change we wish to bring about, to be beneficent, must be gradual; that the cells must be educated by degrees to the new duties we wish them to perform; that anything approaching starvation is to be condemned. In regard to diet much albuminous and relatively, little non-nitrogenous food should be taken, in order, firstly, that the cells, from the abundance of nourishment brought to them, shall be capable of great chemical activity; and, secondly, that the tissue-fat thus necessarily formed shall not be preserved from oxidation by the presence of the more readily oxidizable food-fat and starches. But we must always keep in mind that, as the fat of the body becomes by this process gradually reduced, the diet must undergo a corresponding change, more and more of the non-nitrogenous foods being allowed as the body grows relatively richer in albumin and poorer in fat. For, unless this be done, a point will be reached where not only the fat of the body, but the albumin as well, will be consumed, and the patient, after feeding thus on his own muscular and glandular tissues, will begin to complain of weakness and lassitude. Hard and fast rules for dieting cannot be laid down. Patients should be seen, and weighed from time to time, and as occasion demands one kind of food should be increased and the other diminished. The following diet chart is recommended by Dr. Mendelson:—Breakfast: 1 cup (6 ozs.) tea or coffee, with milk and sugar. Bread, 2½ ozs.

(2 or 3 slices). Butter, ½ oz. 1 egg or 1½ oz. of meat. *Dinner:* Meat or fish, 7 oz. Green vegetables, 2 oz. (spinach, cabbage, string beans, asparagus, tomatoes, beet tops, etc.). Farinaceous dishes, 3½ ozs. (potatoes rice, hominy, maccaroni, etc.), or these may be omitted and a corresponding amount of green vegetables substituted. Salad, with plain dressing, 1 oz. Fruit, 3½ ozs. Water, sparingly. Supper or Lunch: 2 eggs, or lean meat, 5 ozs. Salad (radishes, pickles, etc.), 3½ oz. Bread ¾ oz. (1 slice). Fruit, 3½ ozs. Or fruit may be omitted and bread, 2 ozs., substituted. Fluids (tea coffee, etc.), 8 ozs. No beer, ale, cider, champagne, sweet wines, and spirits. Claret and hock in great moderation. Milk, except as an addition to tea or coffee, only occasionally. Eat no rich gravies, and nothing fried. Lassitude and fatigue are signs that the muscular tissue, as well as the fat, is being reduced, and when these are complained of, more non-nitrogenous food must be allowed. Patients sometimes express a wish to grow thin quickly, This must never be attempted. To be beneficial, as well as lasting, loss of fat should be gradual.

George Brown.

230. *Watkins on Enemata of Magnesium Sulphate in Intestinal Obstruction.*—For more than a year, the author has used at the Women's Hospital, Chicago, in cases where cathartics were indicated, concentrated solutions of magnesium sulphate in the form of enemata. At first he used two ounces of the salt to four ounces of water; but latterly he has combined glycerine with the solution. He has had excellent results in constipation, serious intestinal obstruction associated with nausea and vomiting, and after laparatomy, when sepsis and peritonitis threaten to develope. In acute and chronic pelvic inflammation, the watery depletion caused by the injections produces favourable effects. The injections are useful, also, in obstructive dysmenorrhœa. The following is the formula recommended: ℞ magnes. sulph. ℥ii, glycerine ℥i, aq. ad. ℥iv., misce. The advantages claimed for this enema are: (i) Its action is local, producing diffusion. (ii) Its action is free, and seldom fails. (iii) Time of action is short. (iv) The bulk is small, causing little, if any, discomfort. (v) It is as unirritating as a simple enema.

231. *Richardson on Galvanism and Resuscitation.*—Referring to the recent experiments of Dr. Griswold, on the effect of the Faradic current upon the nervous supply of the heart immediately after death, Dr. Richardson points out that Griswold's conclusions are identical with his own, as published in his lectures on death by chloroform in 1870. Dr. Richardson's researches showed that when the heart is failing in power, the effect of the Faradic current is to reduce the feeble action still more quickly from exhaustion of the cardiac muscle. The experiments of Messrs. A. Hare and E. Martin, recorded in the Warren Prize Essay on "The Value of Electrical Methods Employed for the Resuscitation of Persons who have Ceased Breathing," point to the same conclusion. They found that the only place where the positive pole could contract the diaphragm also inhibited the heart. Hence the employment of galvanism for the direct excitation of the heart in cases of collapse and of fatal narcosis is to be discouraged, because it extends the danger also to Faradization of the muscles of respiration. In some experiments made with a double-acting bellows, conjoined with a galvanic current, Dr. Richardson induced remarkable respiratory action, but with invariable failure of the cardiac movements. He therefore advances once again the danger of the practice of galvanism. When a patient is lying in collapse from chloroform or other cause, no attempt should be made to resuscitate by means of the direct action of the galvanic current, either through the respiratory or the cardiac organs. If by the current, active movements either of the respiratory muscles or the heart are called forth, it is like a whip to a jaded horse at best, and merely exhausts more speedily a failing centre of force which it does nothing to re-supply, and with possible antagonism of action between the effect produced on the diaphragm and the heart.

232. *Spanton, on Iodate of Calcium as an Antiseptic.*—Attention was first directed to iodate of calcium—which has recently attracted much notice as a novelty—as a powerful antiseptic and disinfecting agent, by Mr. E. Sonstadt in 1872, and in the following year Mr. Spanton obtained a supply of the substance from Mr. Sonstadt, and he has used it in surgical practice, more or less, ever since. His experiments show that its antiseptic properties are powerful and lasting. A bottle of urine, to which a small quantity of the salt was added 17 years ago, has now no odour, except that of iodine, whereas a fellow specimen kept in a bottle without iodate is, of course, putrid. Another bottle containing boiled meat to which the iodate was added is perfectly free from putrid odour, whilst a fellow specimen without the salt is intolerable. The salt has the property of retaining urine clear, when added to it while fresh. Acting on this knowledge, the author has employed it with excellent effect in washing out the bladder in chronic cystitis, when the urine was very offensive. Given internally in such cases, it had the effect of clearing the urine and diminishing fœtor, although in this regard he has usually had better results from boracic acid. As an antiseptic dressing for wounds, recent amputations and injuries, it is certainly useful, but the author finds its insolubility (requiring about 400 parts of water for solution) and slowness of action decided drawbacks to its utility. Its innocuous and unirritating properties, and its marked effect upon the renal secretion, however, indicate that it may be used with special advantage in such cases as cystitis, nephritic abccess, and for renal operations generally. Being inodorous, it does not, like some antiseptic agents, disguise other odours by a still worse one of its own.

233. *Merck on Exalgine or Methylacetanilid.*—[C_6H_5 N (CH_3) (CH_3 CO)] was first obtained by Hoffmann, in 1874. It forms beautiful, white, tasteless and odourless crystals, melting at 101° cm., slightly soluble in cold water, easily soluble in alcohol and alcoholic water, mixed. Kahn and Hepp examined its antipyretic value in 1877, but arrived at no satisfactory results (*Berl. klin. Wochenschr.* 1.) Later, Dujardin-Beaumetz and Bprdet (*Acad. des Sciences*, March 1889, and *Bull. gén. de Thérap.*, 1889), as well as Gaudineau (*Thère. de Paris*, 1889), showed that its chief physiological and therapeutical action was exerted in the sensory and motor nerve systems, whilst its action on the breathing, circulation and thermogenesis was only of secondary importance. From their clinical experience they were able to report that it is a potent analgesic, often surpassing phenacetin in neuralgia, and in many cases antipyrin and antifibrin too. In the relief of pain, exalgine is especially valuable in ordinary neuralgias (*a frigore* and congestive forms). In sciatica and muscle rheum-

atism and joint affections, its action is less favourable. It lessens the pain, but as the cause remains, the pains return when the sedative action has worn off. In healthy persons, when given in doses of 20·40 cm., even of 80 cm. in the 24 hours, gives rise to no perceptible symptoms; after a dose of 80 cm., there is, however, often a feeling of giddiness or intoxication. Cyanosis was never observed. According to Dujardin-Beaumetz, it is just given in the following formula:—

R. exalgine	2·5	R. exalgine	2·5
dissolve in		dissolve in	
Sp. menth. pip.	5·0	N. cort. amant.	5·0
then add		then add	
Aq. tiliae	120·0	Aq. destll.	120·0
Syr. flor. amant.	30·0	Syr. cort. amant	30·0

Morning and evening one tablespoonful (=0·25 grs. exalgine.)

Exalgine is very useful, not only in true neuralgias, but also in sympathetic neuralgias, tabes and angina pectoris.

G. D'Arcy Adams, M.D.

Gynæcology and Obstetrics.

RECENT PAPERS.

234. Cordes, Dr.—On a New Double Catheter for Uterine Injection. (*Jour. of the Amer. Med. Assoc.*, Jan., 1890.)

Art. 234. *Cordes on a New Double Catheter for Uterine Injection.*—Dr. Cordes describes a new double catheter for uterine irrigation. This instrument is open at the distal end, and consists of two tubes in one; a channel for ingress and another for egress. In order to be able to cleanse this with ease, the author had made a sound with a double groove, and these grooves are converted into tubes by simply covering the instrument with a sheath of soft india-rubber tubing. At the upper end of the egress tube there is a hollow, and in the india-rubber tubing a hole to correspond, so that the return fluid can run away. The author assumes that everyone who uses this instrument places the patient on her back while the uterine cavity is being irrigated The only weak point in this contrivance is that the india-rubber tubing cannot be cleansed very readily; but tubing is so cheap that it can be renewed each time the instrument is used.

Richard Neale, M.D.

Diseases of the Nervous System.

RECENT PAPERS.

235. Kowalewsky, Prof.—On the Treatment of Epilepsy. (*Russ. Archiv. Psych. and Neurology.*)

Art. 235. *Kowalewsky on the Treatment of Epilepsy.*—Professor Kowalewsky, of Kavkov, gives an interesting account of his plan of treatment in cases of epilepsy. He regards the cases in which epilepsy has not been present for more than 10 years as the most probable ones for cure, and he estimates that cases must be under treatment for at least two years. During the first half year he gives a drachm of bromide of soda, or one of the other bromide salts every 24 hours, and usually adds three or five grains of the iodide of soda and gives the medicine in the morning, before dinner, and at night, each dose being given in a large quantity of water. In the case of females he stops the treatment during the catamenia. During this time the patient is given good diet, preferably one of milk and vegetables, and in scrofulous cases cod liver oil is given. At the end of the half year all treatment is stopped for two to six weeks, when the treatment is resumed; the bromide and iodide is reduced to one half. At the end of the second half year treatment is again stopped for some weeks, and when it is again continued bromide only is given in doses of five to ten grains morning and evening. After this has been continued for some months the bromide is given in five grain doses once a day. After continuing this treatment for six months nitro-glycerine in small doses is given. Professor Kowalewsky, says that by following out this plan of treatment, he has been enabled to cure many cases, and he believes most cases of epilepsy of not more than 10 years standing may be cured. Alcohol is strictly forbidden; tea is allowed, but not coffee or chocolate. Warm baths are thought to be very useful at times.

Francis Hawkins, M.D.

Pathology.

RECENT PAPERS.

236. Mackintosh, Dr.—On Spontaneous Rupture of the Left Auricle. (*Lancet*, Feb. 1, 1890.)

237. Louis, M.—On a Case of Renal Lymphadenoma in a Child. (*Bull. Soc. Anat. de Paris*, 1890.)

238. Ehrhardt, M.—On a Case of Myxomatous Tumour of the Skull. (*Bull. de la Soc. Anat. de Paris*, 1890.)

239. Ehrhardt, Dr.—On Complicated Hair-lip. (*Bull. de la Soc. Anat. de Paris*, 1890.)

240. Zehnder, Dr.—On Cancer Development in Lymph Glands. (*Virch. Arch.*, bd. 119., hft. 2. s. 261.)

241. Schwalbe, Dr.—On the Pathology of the Pulmonary Valves. (*Virch. Arch.*, bd. 119. hft. 2., s. 271.)

242. Török and Tommassol, Drs.—On the Nature of Epithelioma Contagiosum. (*Monatsh. f. Prakt. Derm.*, vol. 10, No. 4.)

Art. 236. *Mackintosh on Spontaneous Rupture of the Left Auricle.*—Dr. Mackintosh records a case of a man, aged 61 (employed in engineering work, who had always enjoyed good health, who, one evening, on returning from his work complained of pain in the epigastrium. The next morning Dr. Mackintosh was sent for. On his arrival the man was dead, lying on his right side, there was no evidence of any struggling having taken place. A *post-mortem* was subsequently made. The pericardium was found to be full of dark blood, partly clotted and partly fluid. The heart was enlarged—is stated to have undergone fatty degeneration. The auricles and ventricles were empty, valves healthy. In the left auricle, at the upper and posterior part, an irregular ragged opening was noticed, which admitted the little finger. The margins of this aperture, and also the surrounding tissue for about a quarter of an inch, were ecchymosed. The liver was fatty; other organs healthy. [Spontaneous rupture of the heart is rare. In 55 cases collected by Elléaume, in 1858, he found rupture of the left auricle in only two cases. Dr. Quain, in 100 cases, found rupture of the left auricle in two cases only.—*Rep.*]

Francis Hawkins. M.D

237. *Louis on Renal Lymphadenoma in a Child.*—The child had hypospadias and cleft scrotum. The tumour, which affected the left kidney, was of the size of the head of a child a year old. The lower third of the right kidney was also invaded with neoplastic tissue. Microscopic examination shewed that the tumours were lymphadenomatous.

238. *Ehrhardt on Myxomatous Tumour of Skull in a Child.*—A male child, aged five months, presented on the scalp a tumour the size of a Tangerine orange, which was quite fluctuating and transparent. Pressure produced very slight diminution in size and did not cause the child to cry. There was slight hydrocephalus and the tumour was diagnosed as a meningocele. After death the tumour proved to be myxomatous in its nature, and to have no connection with the interior of the skull.

239. *Ehrhardt on Complicated Cleft Palate.*—A male child, aged 12 days, presented a left hare-lip and cleft palate, involving bones and soft parts. After death a dissection was made, which showed that there were in the right superior maxilla and premaxilla six dental follicles, and on the left superior maxilla four. It also showed that half of the left premaxilla adhered to the superior maxilla of the corresponding side, and carried the dental follicle for the left lateral incisor. This form of cleft palate confirms Albrecht's theory as to the development of the premaxilla.

240. *Zehnder on Cancer Development in Lymph Glands.*—The author's conclusions are as follows:—(1) The first groups of cancer cells appear in the afferent vessels of the lymph glands. (2) Subsequently the cancer extends itself by the central growth of the first groups. (3) The development takes place usually in an alveolar manner. (4) Extensive mitosic processes are to be observed in all the cancer groups. (5) The tissue of the lymphatic glands undergoes at first no alterations consequent upon the entrance of the cancer cells, and especially no appearance of proliferation. (6) Later, however, appearances due to compression are to be observed. (7) The blood-vessels show considerable hypertrophy of their muscular coats as well as endothelial alteration. (8) The endothelium of the lymph vessels, as well as that of the glands, shows no obvious alterations.

241. *Schwalbe on the Pathology of the Pulmonary Valves.*—In this paper Dr. Schwalbe gives an account of the following cases of disease of the pulmonary valves. (1) Malignant ulcerative endocarditis of the right pulmonary valve, and of the conus pulmonalis in a female aged 38. (2 and 3) Two cases of chronic fibrous 'endocarditis of the pulmonary valves with retraction in the first, female, ætat 68. The right valve was extraordinarily shrunken, contracted and thickened throughout, especially at its free border. In the second, male, ætat 84, the left valve was only present in a rudimentary condition. Its left border was almost united with the wall of the artery the right being free. (4) Gummatous myo-and endocarditis with stenosis of the conus pulmonalis. Gummous arteries and stenosis of the pulmonary artery, gumma of the pulmonary valves, with complete absence of the right. In connection with this case the author alludes to the rarity of syphilis of the heart. BERTRAM C. A. WINDLE M.A., M.D.

242. *Török and Tomassol on the Nature of Epithelioma Contagiosum*—The authors, after an exhaustive study of the bodies described as sporozoa in molluscum contagiosum, have come to the conclusion, based on a large series of experiments with various chemical agents that they are of a parasitic nature. The parasites themselves are, as is shown by the description of their experiments, no other than products of degeneration, which, in virtue of their chemical qualities, are very similar to colloid substance. The substance of which they are composed and which at the commencement is found in small quantity and in fine divisions, grows very quickly and increases in the centre of the cell, whilst the outer strata undergo the process of cornification. In the well-marked distinction which exists between the contents and the envelope, the normal relations are faithfully reproduced, in virtue of which the inner portion of the epithelial cell takes no part in the process of cornification.

Bacteriology.

RECENT PAPERS.

243. KLEBS, PROF. E.—On a Condition of the Blood in Influenza. Zürich. (*Centralblt. f. Bakteriologie*, vol. vii., No. 5, Jan. 24, 1890.)

244. SCHOTTELIUS, Prof.—Upon the Rise of Temperature which Occurs in Phthisical Lungs after Burial. (*Centralblt. f. Backt.*, vol. vii., No. 9, Feb. 21, 1890.)

ART. 243. *Klebs on a Condition of the Blood in Influenza.*—In this article Professor Klebs describes certain appearances which he has noticed on examination of the blood in several cases of influenza. He prefaces his communication by saying that there can be no doubt that the disease is due to a contagium virum. His researches have been directed to cases of the disease occurring in his own house, including himself, as well as to the material at his disposal at the Pathological Institute at Zürich. From the consideration of the symptoms of the disease, he came to the conclusion that attention ought to be directed, in the first place, to any abnormalities in the blood. With this view he made cover glass preparations of blood from the affected cases, the blood having been obtained by simple puncture of the end of the finger. The specimen was prevented from drying up by being surrounded with paraffin, and was examined with high powers of the microscope (Zeiss apochromatic system 1·5 mm. focus, or $\frac{1}{12}$ to $\frac{1}{18}$ oil immersion). With a good light was seen in such a preparation an enormous mass of small, living and moving bodies, strongly refractive, agreeing in size, form and movement with the bodies which the author had observed, but never in such masses, in the blood in cases of pernicious anæmia. In the blood obtained, with all antiseptic precautions, from the heart of a fatal case of influenza, Keebs found small living and moving monads of 1-1·5 micra in diameter, and as well larger forms, 2-3 micra, and the largest up to 4-5 micra and 2-3μ thick, and many of these bodies, especially of the intermediate size, were seen at the margins or within the red blood corpuscles. Their exact situation could not be made out in the fresh preparation, so staining of the specimens was tried, with success. Ehrlich's methylen blue solution was the reagent employed. The monads were then seen to be provided with flagella, the greater part of which were actually within the red blood corpuscles. There appears to be no doubt that there were several forms of the bodies discovered, and it is suggested that, as in other intermittent fevers, each accession of the fever is due to the development of a crop of one organism from its incomplete or spore-like condition pre-existing in the blood.

VINCENT D. HARRIS, M.D.

244. *Schottelius upon the Rise of Temperature which Occurs in Phthisical Lungs after Burial.*—Schottelius contributes an account, supplementary to one he brought forward before the section of hygiene at the meeting of German naturalists last summer, of some very curious experiments he has made, demonstrating that phthisical lungs during their disintegration after death develop more heat than do healthy lungs under similar circumstances. He draws attention in passing to the fact that tubercle bacilei retain their peculiarities with regard to staining materials, and their virulence for years after the death of their host. His method of experiment may be thus described. (1.) On July 10, a maximum thermometer, which was graduated in fifths from 5° to 40° was buried in a sound lung (within the body). (2.) At the same time, 25 cm. from the situation of the coffin, a similar thermometer was buried in the ground. (3.) On July 23, a similar thermometer was buried in a phthisical lung. (4.) On the same day a larger thermometer was buried in the lung of another phthisical body. On February 4, 1890, when the temperature of the atmosphere was 5° c., the preparations were exhausted. The boxes in which the bodies had been placed were uninjured, and contained a blackish-grey semi-fluid mass, in which the thermometers were discovered. Thermometer No. 2 lay undisturbed in the earth between coffins 1 and 3. The thermometers registered the following temperatures: No. 1, normal large + 22; No. 2, control thermometer + 13; No. 3, phthisical lung + 18; No. 4, ditto + 34.° The temperature of the control thermometer was about the normal year temperature at the depth below the surface at which it had been placed, according to the researches of Soyka (*Bodea*, p. 163), for the neighbourhood of Treiburg. The process of decay in normal lung had been accompanied by a maximum temperature of 22° c., whilst in experiment No. 4 (the thermometer, No. 3, appears to have become defective in some way, which the author explains) the decay of a phthisical lung developed a maximum temperature no less than 12° higher. VINCENT D. HARRIS, M.D.

Syphilography.

RECENT PAPERS.

245. SCHUSTER, Dr.—On Gonorrhœal Rheumatism or Syphilis? (*Archiv für Derm. und Syph.* No. 3, 1889.

246. MACKENZIE, Dr. STEPHEN—On a Case of Lupus and Syphilis. (*Brit. Med. Journal*, Jan. 4, 1890.)

247. MACKENZIE, Dr.—On a Case of Varioliform Syphilide. (*Ibid.*)

248. GRAY, Dr.—On Intra-cranial Syphilis (*New York Med. Journ.*)

ART. 245. *Schuster on Gonorrhœal Rheumatism or Syphilis?*—The object of this paper is to show that certain complications which sometimes occur in connection with affections of the joints following gonorrhœa are not really due to gonorrhœal rheumatism, but to syphilis. In support of this view, seven cases of joint affection following urethritis are related, in all of which other complications occurred at various times, and yielded to mercury after ordinary remedies had failed.

The conclusions arrived at by the author are the following:—One or more joints may become affected after urethral gonorrhœa, as a result of infection by the special gonorrhœal infective material. But, in addition, the infective material of syphilis may be also at work, in which case it gives rise to complications outside the joints. If inflammation of the os calcis is present, the influence of syphilis becomes suspicious, and if the tuberosity of the tibia, or the sternum, or the sacrum be also affected, the suspicion of syphilis is strengthened, and mercurial treatment is indicated. If iritis be present with the joint affections the presence of syphilis is made certain. Endocarditis or pericarditis points to syphilis. Mercurial treatment in these cases, together with attention to the general health, leads to improvement or to cure.

246. *Mackenzie on a Case of Lupus and Syphilis.*—The patient was an unmarried woman, aged 44, and when first seen it was difficult to say whether she was suffering from lupus *or* syphilis. The case was now regarded as lupus *and* syphilis. The disease began at the age of eight years, and had persisted until now. When first seen it looked extremely like syphilitic ulceration. It affected the greater part of the face and the lips, and had spread from one part to another, leaving superficial scars where it had healed. No history of syphilis was obtained, though carefully enquired for. This, and the fact that it began at the age of eight, and that no signs of inherited syphilis were present, led to the belief that it was lupus. After various plans of treatment had failed, iodide of potassium alone and with perchloride of mercury succeeded. Numerous relapses had occurred, and each had yielded to iodide and mercury, though it was found that their action was increased by the use of iron and cod liver oil. The disease was now practically cured, numerous soft white scars being left.

247. *Mackenzie on a Case of Varioliform Syphilide.*—A man, 40 years of age, had a tubercular and ulcerative eruption on the forehead and scalp, closely resembling "acne varioliformis." That this case was syphilitic was beyond question, as the man had had primary syphilis 14 years before. So close was the resemblance between the two affections in many cases that many experienced dermatologists regarded all cases of acne varioliformis as syphilitic, but that it was some times independent of syphilis was clear, as in a case Dr. Mackenzie had described and depicted in the "Clinical Society's Transactions," vol. xvii., p. 227. This case and the preceding one were shown at a meeting of the East London and South Essex district of the Metropolitan Counties Branch of the Brit. Med. Assoc.

248. *Gray, on Intra-cranial Syphilis.*—Dr. Gray discusses the symptoms of intro-cranial syphilis, and thinks the following pathognomic:—1. A hemiplegia occurring in a person 40 years of age, with or without preceding cephalalgia. 2. A quasi-periodical cephalalgia, generally nocturnal, but occurring at other times, especially in the afternoon. 3. Cephalalgia, followed by hemiplegia, and which ceases immediately the hemiplegia occurs, and seldom recurs. 4. Convulsions in the adult, which have not been preceded by con-

vulsions in infancy, and are not of traumatic or nephritic origin, or due to pregnancy, or in an individual subject to migraine. 5. Symptoms indicative of a lesion at the base of the brain. 6. A comatose condition extending over days or weeks, not traumatic, diabetic, meningitic, nephritic, or from typhoid fever.

FRANCIS HAWKINS, M.D.

Dermatology.

RECENT PAPERS.

249. CHARON and GEVAERT, Drs.—On Lupus of the Sole of the Foot in a Child of Five Years Old. (*La Presse Médicale Belge*, No. 30. *Monatsh f. Prakt. Derm.* vol. 9, No. 12.)

250. HALLOPEAU, Dr.—On Alopecia produced by Scratching. (*Monat. f. Prakt. Derm.*, vol. 9, No. 12.)

251. ELOY, Dr.—On the Treatment of Psoriasis by Menthol. (*Monatsh. f. Prakt. Derm.*, vol. 10, No. 3. *Allgem. Medic. Centralzg.*, No. 73, 1889.)

252. RIES, Dr.—On the so-called Fungus of Psoriasis. (*Monatsh f. Prakt. Derm.*, *vol.* 10, *No.* 4.)

253. EICHHOFF, Dr.—On the Treatment of Skin Diseases by a new Combination of Iodine, Aristol. (*Monat. f. Prakt. Derm.*, vol. 10, No. 2.)

254. WERTHEIMER, Dr.—On the Treatment of Universal Cutaneous Pruritus. (*Mont. f. Prakt. Derm.*, vol. 10, No. 1.)

255. WHITE, Dr.—On Keratosis Folliculaire (Psorospermose Folliculaire Végétante.) (*Journ. of Cutan. and Genito-Urin. Dis.*, vol. viii., No. 88.)

256. BULKLEY, DR. L. D.—On the Treatment of Eczema in Elderly People (*New York Med. Rec.*, Feb. 8, 1890.)

ART. 249. *Charon and Gevaert on Lupus of the Sole of the Foot in a Child Five Years Old.*—Drs. Charon and Gevaert relate a case of primitive lupus of the sole of the foot which appeared two years previously, after an injury caused by the prick of a nail. The father of the child was consumptive. The treatment consisted in scraping, and application of chloride of zinc. A cure was effected in three weeks. The microscope confirmed the diagnosis. Groups of tubercles were found, characterised by epithelial, embryonic and giant cells, as well as by the presence of the bacillus of Koch in the latter.

250. *Hallopeau on Alopecia produced by Scratching.*—Dr Hallopeau presented at the weekly meeting of the physicians of the hospital St. Louis, a man with circumscribed imperfect alopecia produced by morbid scratching of the hairy parts of the body. The hair on the pubes was torn out in tufts. In all these parts the patient feels the most violent itching, and scratches himself severely. M. Besier proposes for such a condition the name "trichomania." He has treated a child who tore out its hair day and night in order to eat it. He considered that nail-biting was a form of mania infantilis. Hallopeau proposed the name "trichotillomania."

251. *Eloy on the Treatment of Psoriasis by Menthol.*—Dr. Eloy recommends for troublesome irritation of the skin in chronic eczema, urticaria, pruritis senilis, etc.: menthol as a tincture (menthol 1 to 3, alcohol 50), or as a liniment (menthol 3, olive oil lanol. āā 30). In obstinate cases it appears necessary to increase the strength of the menthol from 10 to 15 per cent. In chronic eczema, therefore, the author orders menthol 2 to 10 parts, bals. Peru 5 parts, lanol. 100 parts.

252. *Ries on the so-called Fungus of Psoriasis.*—The author finds that the appearance described by Lang as a fungus in the scales of psoriasis is usually found when epidermis was examined from apparently healthy parts of the skin; and further examination showed that the appearance was in reality no fungus at all, but an artefact produced by treating scales with solutions of alkalies. He could produce it at will by combining substances such as olive oil and lanoline. Ries considers that several fungi described by authors, as being associated with skin affections are artefacts, and produced in a similar way.

253. *Eichhoff on the Treatment of Skin Diseases by a New Combination of Iodine, Aristol.*—Aristol is a combination of iodine and thymol. Dr. Eichhoff received from the firm of Bayer & Co., Elberfeld, a specimen with which he experimented in the treatment of skin diseases. Aristol is used in a 10 per cent. ointment with vaseline. The results of the experiments were as follows:—In all cases aristol is a harmless medicine. It possesses no toxic qualities, and combines with its harmlessness other pleasant advantages, such as want of smell. 2. Only in one case did it fail to produce the expected result, and was inferior to the action of iodoform—in a case of soft chancre. 3. In cases of psoriasis its effect was somewhat slower than that of the known sovereign remedies, chrysarobin, pyrogallic acid, etc., but it has the advantage of not being attended by toxic dangers, or by extremely unpleasant and injurious effects. It is therefore to be preferred. 4. In another group of skin diseases—the mycores—aristol has a more favourable effect than other known remedies, being quicker and, at all events, less irritating than many others. 5. In ulcus cruris and tertiary syphilitic ulcerations, a more rapid result is obtained with it than with any hitherto known medicament. 6. In lupus it excels all other, even the best remedies, as well in regard to harmlessness as to quickness of effect.

254. *Wertheimer on the Treatment of Universal Cutaneous Pruritis.*—Dr. Wertheimer states that in the case of a woman, who suffered from universal nervous pruritus, he tried the effect of a 3 per cent. solution of salicylate of soda, two tablespoonfuls being taken three times a day. The result was most excellent. After taking six tablespoonfuls the patient enjoyed a night of undisturbed sleep. The following day the improvement continued, and at the end of three days the irritation of the skin had entirely disappeared. The salicylate of soda was continued in smaller doses for a few days longer, with the result that the itching has not returned.

255. *White on Keratosis Follicularis.*—Dr. White published a remarkable case of this disease before attending the Congress at Paris. At the International Congress of Dermatology, held at Paris in August, a patient was shown as an example of an affection described by Darier, Chef du Laboratoire de la Faculté à l'hôpital Saint Louis in the *Annales de Dermatologie et de Syphilographie*, July 25, 1889, under the title "Psorospermose Folliculaire Végétante." The same affection has formed the subject of a "Thèse de Paris" by Dr. A. Thibault, May 8, 1889. M. Darier had previously made a communication upon the subject to the Société de Biologie on March 25,

1889. The observations of this gentleman were based upon two cases of the affection, which had been seen at the Saint Louis Hospital during the preceding year. Dr. White had no hesitation in pronouncing the affection to be the same as that described by himself. The conclusions of M. Darier may be briefly stated as follows:—There exists in man a group of cutaneous diseases which deserve the name of psorospermoses, due to the presence in the epidermis of parasites of the order of sporozoa, This class includes the gregarinæ, the oval psorospermoæ or coccidiæ, the sarcosporidiæ, the psorosperms of fishes or myxosporidiæ, and the psorosperms of the articulates or microsporidiæ. Early after Dr. White's return from the congress there presented herself at his clinic at the Massachusetts General Hospital a case sent by Dr. Everett, of Worcester, for diagnosis, under whose observation it had been for 18 months. The lesions consisted in numerous firm hemispherical and conical prominences, of a dark brown colour, two or three times as large as those above described and more horn-like in consistence. They were seated about the mouths of the sebaceous glands; over the pubes they were the most abundant and largest. They resembled in all particulars the lesion of the same grade of development in the case reported by him in the *Journal of Cutan. and Genito-Urin. Dis.* in June, and in that exhibited at the Paris Congress above referred to. The tissues in this case were carefully examined for Dr. White by Dr. Bowen, with a special view to demonstrating the animal parasites belonging to the sporozoa described by M. Darier. Dr. Bowen discovered the appearances described by M. Darier and does not deny the possibility of their being coccidia, but does not consider that their parasitic nature can be placed beyond all doubt until some positive proof is offered by culture or inoculation, or until some further analogy with the sporozoa can be shown. In all the four cases of this rare disease which have been examined these bodies have been found. American observers, however, hesitate to pronounce them of extraneous character. Specimens were sent from Harvard University to Philadelphia to Professor Leidy, who could not pronounce himself certain regarding their character. Dr. White insists that the whole question of the nature of these bodies must still be considered as open.

256. *Bulkley on the Treatment of Eczema in Elderly People.*—The author is of opinion that a large number of cases of eczema in elderly people are due to anœmia, associated with imperfect action of the bowels and kidneys. Tonic treatment is indicated, and the bowels should be moved regularly once a day. When a diuretic is called for, the acetate of potassium should be given in preference to other potassium salts. Arsenic is seldom of service, and alcohol should not be given. Local applications are useful, but the general treatment referred to he regards as all important. GEORGE BROWN.

Laryngology.

RECENT PAPERS.

257. FOSTER, Dr.—On Topical Applications to the Upper Air Passages. (*Kansas City Med. Rec.*, Jan. 1890.)

258. MYGIND, Dr.—On a Case of Acute Hæmorrhagic Glossitis (*Jour. of Laryn. and Rhin.*, Jan., 1890.)

259. PICANO, Dr—On the Removal of a Leech from the Sub-glottic Region. (*Revue. de Laryng. et d'Otologie*, Feb. 1890.)

260. POTIQUET, Dr.—On the Shape of the Nose in true Ozæna, or Atrophic Rhinitis. (*Revue de Laryngologie, etc.*, Jan., 1890.)

261. RICHELOT, Dr. — On Inter-crico-thyroid Laryngotomy. (*L' Union Médicale*, Jan., 1890.)

262. GLOVER, Dr.—On Ear Troubles and Lesions in the Influenza Epidemic of 1889-90. (*Annales des Maladies de l'Oreille, et du Larynx, etc.*, Feb., 1890.)

263. DESVERVINE, DR. C. N.—On Laryngitis Poliposa Congenita. (Rev. de Ciencias Medicas. and Rev. de Med. and Cirurg. Pract., Jan. 1890.)

264. VANDERBURG, Dr. C. R.—On Forced Respiration. (*New York Med. Rec.*, Feb. 8th 1890.)

265. BOCCOMINI, Dr.—On Total Extirpation of the Larynx for Primary Medullary Carcinoma. (*Gaz. dez. Orpitali*, Jan. 1890.)

257. *Foster on Topical Application to the Upper Air Passages.*—Dr. Foster states that the treatment of chronic diseases of the upper air passages should be directed by two principles:—1. By taking cognizance of cutaneous nerves, associated in the causation and perpetuation of inflammation of mucous membranes, and 2. Local disinfection. Hyperæmia of the upper air passages, the result of hyperæsthesia, is greatly benefited by the local use of anodynes. A sluggish capillary circulation is benefited by stimulant applications, and mild escharotics are valuable in promoting the healing of abrasions and ulcers. The treatment of catarrhal affections consists largely in the treatment of nasal passages, and this involves the restoration of these passages to a normal condition, by the removal of obstructing bone and cartilage, reducing hypertrophied membrane, and correcting hyperæmia or other morbid conditions, by the lance, saw, knife, cautery, or escharotics. The cautery stands at the head for removing these obstructions. The object to be accomplished by the use of the cautery is not the destruction of tissue, but to restore the inflamed mucous membrane to a healthy condition.

258. *Mygind, on a Case of Acute Hæmorrhagic Glossitis.*—Dr. Mygind contributes full notes of a case of undoubted glossitis acuta hæmorrhagica. The patient was a man aged 48, who had enjoyed fairly good health, except occasionally attacks of rheumatism. On Sept. 11th, 1889, he rose as usual at 6 a.m., went to business feeling perfectly well. At 7 a.m. he felt poorly and lay down on the sofa, and commenced having rigors. He then slept, and awoke about 2 p.m. feeling blood in his mouth. At 2.30 p.m. he began to feel pains in his tongue, and on looking at it found it was black and swollen. He commenced to vomit, and the tongue continued to swell. At 4.45 p.m. he was seen by the author, who found him very restless; the tongue was much swollen, and the patient was constantly trying to get rid of the saliva from his mouth. There was no solution of continuity on the tongue, and no evidence of any point where the disease started from. The patient was a chronic drinker, and no doubt his disease was caused by fraglity of the blood vessels, as he had previously been treated for attacks of hæmorrhage from the nose. He was treated with ice, and cold liquid nourishment, and frequent doses of extract secal cornuti. He became very delirious, resembling delirium tremens, and for three or four

days he could not sleep, but at last he obtained rest from large doses of hydrate of chloral, and by September 16th, the tongue was nearly well, except that a deep ulceration took place from the irritation of a sharp molar tooth, which healed up in about ten days. The case was not one of simple hæmorrhage of the tongue, because the lesion had an inflammatory character, being accompained by general symptoms, such as fever, general malaise, albuminuria, which symptoms generally accompany simple acute glossitis; both sides of the tongue were impaired by the disease; tumefaction was equally developed in places where blood appeared or not, proving that the swelling was not caused by blood alone. There was no spot which, by greater swelling or accumulation of blood, could be considered as the source of the bleeding, and no traumatic lesion could be detected. If the swelling had been caused by hæmorrhage alone, there would have been some external bleeding. As to the ætiology of the case, nothing much can be said, and this is usually the case in acute glossitis. As to treatment, the usual method of making deep incisions was not carried out, and the subsequent course showed that they would have been superfluous.

RICHARD NEALE, M.D.

259. *Picano on a Leech in the Sub-glottic Region extracted through the Natural Passage.*—A man, aged 30, came to Dr. Picano's clinic with the following history: Fifteen days previously, he was taking a drink from a stream in the country, when he felt something enter his throat. He took little notice of it at first; but soon he felt very uncomfortable sensations in the throat, and had slight difficulty in breathing. His voice was somewhat altered, and he coughed up a little blood. He suspected that he had swallowed a leech, and made every effort to get rid of the creature, but without avail. After fifteen days of suffering, he came to Dr. Picano, who, upon examination, found some traces of blood on the posterior wall of the pharynx and at the base of the tongue, and with the laryngoscope perceived a dark coloured body, which moved feebly just below the vocal cords. The mucous membrane of the larynx was congested, and the vocal cords were bloodstained. On phonation, the cords did not completely approximate. Dr. Picano applied cocaine, and succeeded at the second attempt in removing the animal with a pair of laryngeal forceps, guided by the laryngeal mirror. The leech was removed whole, alive, and full of blood, which he had sucked from his host. It measured four centimetres long, and was about as thick as the little finger. The voice and breathing became natural immediately on removal of the animal.

260. *Potiquet on the Shape of the Nose in true Ozæna, or Atrophic Rhinitis.*—Most authors who have written on true ozæna have noticed that the nose in the subjects of this malady is very often flat, and of the so-called saddle-back shape (*ensellé.*) Some authors have attributed to this form of nose a predisposing influence in the production of the disease, and its origin has been set down to scrofula, or to a mere caprice of nature. Dr. Potiquet believes that the form of nose is really the result of the slowly progressing pathological process of atrophic rhinitis which precedes, prepares the way for, and accompanies ozæna. Dr. Potiquet endeavours to establish in the course of his paper the following propositions: 1. It is not true, as has been pretended, that the flattened form of nose predisposes to true ozæna. 2. The flat, saddle-back nose, which has been noticed as a frequent accompaniment of true ozæna, is mostly due to the atrophic rhinitis which precedes and accompanies the ozæna. 3. The nose in ozæna takes or rather preserves the flat form, in those cases more especially in which atrophic rhinitis has set in during infancy. 4. The adult sufferer from ozæna, has, as a rule, not got that shape of nose, which he should have had, according to the laws of heredity. 5. The sufferer from ozæna, very often does not possess the form of nose which his crainal conformation entitles him to.

261. *Richelot on Inter-crico-thyroid Laryngotomy.*—Dr. Richelot records a case of laryngotomy which he had recently performed under difficult conditions, and takes the opportunity of impressing upon practitioners the immense superiority of laryngotomy over tracheotomy in the adult, a fact too frequently forgotten. Tracheotomy in the adult is a hazardous and dangerous operation. There are, of course, some contraindications to laryngotomy, such as, when we have to deal with a stricture of the upper part of the trachea, but in the vast majority of cases we are free to choose, and it is then an error not to choose the simpler and less severe operation. Some descriptions of laryngotomy have needlessly complicated the operation. The anatomy of the region is *nil*. Skin, cellular tissue, crico-thyroid membrane, no vein, no artery, no organ. Retractors are unnecessary, no dissection of layer by layer is needed. Less than a minute is required to complete the operation. Although Trousseau recommended large canulas, it has been amply shown that a canula of nine to ten millimetres diameter, such as will always fit into the crico-thyroid space, suffices for respiration in adults. Richelot has seen such a tube perform its function for many months.

262. *Glover on Ear Troubles and Lesions in the Influenza Epidemic of* 1889-90.—The cases recorded, 15 in number, were observed in Paris at the Lariboisière Hospital. In all there was a marked predominance of catarrhal symptoms in the region of the nose, pharynx and larynx. Almost all the cases were severe inflammations of the middle ear, suppuration setting in early in all except two, and other complications following. All the patients were adults, and the majority women. The onset of ear symptoms followed the onset of the influenza, at an interval of from five to ten days, and otitis in about three to five days after the naso-pharyngeal symptoms. The attack of influenza in the cases observed was not severe, but the naso-pharyngeal catarrh was very pronounced. In some patients there existed old troubles in the nose or pharynx, such as polypi, large tonsils, adenoid vegetation, or chronic pharyngitis. The course of the otitis in the cases observed was relatively rapid. After a period of intense pain, during which the objective signs were confined to slight redness at the circumference of the tympanic membrane, and along the handle of the malleus, or by catarrh of the Eustachian tube, there quickly supervened opacity, bulging and immobility of the membrane from accumulation of fluid in the tympanum. Within about ten days of the onset of otitis the membrane perforated spontaneously, and an abundant otorrhœa, with a relief of pain, ensued. In two cases the trouble did not end here, for a certain amount of mastoiditis occurred in one, whilst in another, the contents of the tympanum were disorganised and the vesicles evacuated. The treatment consisted in boric acid douches for the naso-pharynx, warm emollient and narcotic injections of the external meatus, and leeches to the mastoid. In cases where fluid was present in the tympanum paracentesis was

performed. For the otorrhœa boric injections and a tampon soaked in camphorated naphthol were used. A bacteriological examination of the pus made by M. Netter showed the presence of the streptococcus pyogenes. J. B. BALL, M.D.

263. *Desvervine on Laryngitis Poliposa Congenita.*—On July 19, 1887, a boy, seven years of age, weak and scrofulous, was admitted suffering from chronic hoarseness which had lately increased and which was accompanied by difficult respiration; the alterations of the voice, according to the parent, had existed from birth. After repeated attempts laryngoscopical examination showed the following state of things: "All the right half of the vestibule of the larynx and two-thirds of the left side were occupied by a series of tumours, lobulated and clear yellow in colour. Seven neo-plastic bodies could be counted, apparently, judging from their superior extremities, completely independent of each other. Uniting anteriorly in the middle line, the only permeable point in the glottis was a small space in the right posterior angle. It was not possible to determine their insertions precisely, except in the case of the most posterior ones, which arose from the right half of the inter-arytenoid region and the posterior limit of the middle third of the left vocal cord." Operation was advised but the parents would not consent until August 6th when asphyxia became imminent. Dr. Desvervine then performed tracheotomy. When the patient had got over this, extirpation of the tumours was proceeded with by the mouth with Mackenzie's traction forceps. To operate in a space so confined as the cavity of the larynx in a child of seven, and to extirpate these relatively large tumours was no easy matter, but there was no other course. At the first seance, beginning at the arytenoid region and gradually freeing the vestibule, the pedicles became recognisable with the site of inplantation and number of the tumours. Seven distinct papilomes were discovered, four on the left cord and the remaining three on the anterior two-thirds of the right. When the glottic and supra-glottic region were cleared, an eighth tumour was found similar in appearance to the others, situated deep in the infra-glottic region on the right side, partly hidden by the cord, evidently possessing a broad base. For this a laryngeal fissure had to be made. The tumour was found firmly planted at the level of the right superior border of the crycoid cartilage, occupying almost the whole of the right lateral laryngeal surface. Periods of from three to six weeks were allowed to elapse between the operations. Three months after the laryngeal fissure, a papilloma reappeared—the ninth—pedicled and situated on the base of the right vocal cord in the arytenoid region; this was extirpated with cutting forceps, the point of implantation being touched with chromic acid. The larynx has since completely recovered its respiratory and phonetic function. Desvervine refers to 16 observations of congenital papilloma collected by other authors; seven in girls, eight in boys, one sex not mentioned. Of these cases 12 were fatal; seven from asphyxia without intervention, one from turberculosis, three from thoracic trouble after tracheotomy, one from broncho-pneumonia existing before tracheotomy. Of the four cases of recovery, one was cured spontaneously, the papilloma being ejected in a paroxysm of whooping cough; the history of one is unknown; in the remaining two, cured by operation, one, 15 years of age, was operated on by Lewin, the other, 10 years of age, by Ranchfuss.

G. D'ARCY ADAMS.

264. *Vanderburg on Forced Respiration.*—Although artifiical respiration, as recommended by Sylvester, Hall and others has saved many lives, these methods often fail, especially in cases of asphyxia from poisons which are slowly eliminated. Whichever method is employed, the amount of air displaced in the lungs each time the movements necessary to induce the respiratory act are performed is necessarily small, and the manipulation is tiresome to all taking part in the operation, besides which, the movements may be detrimental to the patient. From time to time various devices for forcing air into the lungs have been introduced, but with the exception of that of Dr. G. E. Fell, of Buffalo, U.S., none of them have, the author asserts, been productive of strikingly successful results. Dr. Fell's method consists in the performance of tracheotomy, inserting a tube in the wound and connecting this with a bellows so constructed as to provide that the air inhaled may be exhaled outside the bellows, thus ensuring constant change of air in the lungs. By this means forced respiration, closely resembling normal breathing, can be kept up for hours. A drawback to this method is the necessity of performing tracheotomy, and for some time past Dr. Vanderburg (of the Medical College, Columbus, Ohio) has been engaged in perfecting an apparatus for use in producing respiration without the performance of tracheotomy. The device, which he now claims to have perfected, consists of a heavy flexible rubber cup, fitting over mouth, nose and chin, and retained either by hand or by straps about the head. In this cup is a brass tube which connects with a bellows by a rubber tube about five feet long. Inside the brass tube are two valves, which are so constructed that they automatically control the inhaled and exhaled air, one directing the inhaled air from the bellows into the lungs, the other giving exit to exhaled air to the outside through the walls of the cup. All the operator must do is to work the bellows at the rate he wishes respiration to be forced, the respirator does the rest. When this device is used we have air forced into the lungs. It is then expired as in natural respiration as soon as pressure on the bellows is removed from the resiliency of the chest-walls, lungs, and diaphragm, as in natural expiration. It resembles natural respiration in that expiration is a passive act. The cup for adults fits any adult face (one is also made for children), and is rendered so nearly air-tight by a slight pressure that the lungs can be filled through it perfectly. The inventor says that the pressure of air in the lungs from the use of the apparatus is not sufficient to cause rupture of lung tissue unless used by an ignorant or careless person. No doubt damage could be done by forcing the lungs beyond their vital capacity, thereby crowding out the pulmonary circulation. The movement of the chest-wall is a guide to the amount of air which should be given. It should be a little greater than normal, and the respirations in any adult may be forced from 15 to 20 times a minute. The author reports three cases of recovery from opium narcosis in which the apparatus was used with success. In one case forced respiration was kept up for three hours, and in the other two for about two hours. [The principle of Dr. Vanderburg's apparatus resembles that of Dr. B. W. Richardson's double acting bellows, which he introduced to the notice of the profession as long ago as 1868.—*Rep.*] GEORGE BROWN.

265. *Boccomini on Total Extirpation of the Larynx for Primary Medullary Carcinoma.*—Over 140 cases of total laryngotomy have now been published, but it

cannot be said that the results are very encouraging. The present case and that of Prof. Albertine are the first performed in Milan. In Italy, besides these, 14 have been done, three by Bottini, six by Novaro, one by Caselli, one by Ruggi, one by Margary, one by Durante, and one by Omboni, of these four recovered ten died. In September, 1888, a peasant 54, was admitted to the hospital suffering from grave laryngeal stenosis. He was a great smoker. In August, 1887, he began to get hoarse, soon lost his voice entirely, and had an incessant dry cough. In March, 1888, Dr. Labus examined him and formed the diagnosis of carcinoma of epithelial aspect. Dyspnœa commenced, gradually increasing at the hospital. Tracheotomy was first performed, which was followed by some improvement. The tumour had not yet passed the confines of the larynx, and therefore the radical operation was indicated. This was performed on Oct. 25, the operation lasting 65 minutes. It was followed by no increase of temperature. With the æsophageal tube broth and marsala were administered, afterwards yolk of egg in broth and wine. On the 28th day the wound had healed; the patient was able to take solid food; and only wore a common tracheal canula. A hard swelling, however, soon appeared on the neck, indolent to prepare. This ulcerated and gave origin to a luxuriant mass of vegetation. After a long and painful illness the patient died on 19 April, 1889.

G. D'Arcy Adams, M.D.

Diseases of Children.

RECENT PAPERS.

266. Townsend, Dr.—On Acute Arthritis of Infants. (*Amer. Journ. of the Med. Sciences*, Jan., 1890.)

Art. 266. *Townsend on Acute Arthritis of Infants.*—Dr. W. R. Townsend has published 19 new cases of joint-disease in children, which are regarded as instances of the condition described by Dr. Terrisse, a French surgeon, and by Mr. Thomas Smith, of St. Bartholomew's Hospital, as acute arthritis of infants. The author gives a good review of the literature of this subject, and describes fully the pathology, ætiology, symptoms, and treatment of the supposed special disease which forms the subject of his article. It is very doubtful, however, whether Dr. Townsend has thus helped in any way to support the views of those who are still disposed to claim a special character for the morbid conditions that have been observed and noted in the published cases of the so-called acute arthritis of infants. The instances recorded here seem to be less uniform in type, and to differ more from each other in conditions of pathology and ætiology than those described by other surgeons. In the cases related by Mr. T. Smith the disease was certainly of an acute character and unconnected with injury; whilst in many of the cases given in this paper, the articular swelling and suppuration seem to have taken a chronic course. The conclusions drawn by Dr. Townsend from his literary study of this disease are not everywhere borne out by the published results of his own clinical experience. Though of his 19 recorded cases only three were fatal, he states that the mortality of acute arthritis is nearly 50 per cent. The disease is regarded as being pyœmic in character, although in four instances only in this table were two or more joints affected. In the body of his article Dr. Townsend states that injury and the exanthematæ are occasionally exciting causes of the disease. It is also stated that in a small proportion of the cases personally observed there was a tuberculous history. A review of this, together with previously published cases of so-called acute arthritis of infants, tends to prove that this is no special or separate disease, but that under this title have been put together cases of septic arthritis, due most frequently to umbilical pyœmia, and cases of ordinary forms of arthritis and epiphysitis, such as often occur in young subjects as the results of direct injury, of inherited morbid tendencies, or of exhausting disease.

Toxicology & Medical Jurisprudence.

RECENT PAPERS.

267. Moore, Dr.—On Some Obscure Cases of Sudden Death Revealed by *Post-mortem* Examinations. (*The Glasgow Med. Journ.*, Feb., 1890.)

268. Marshall, Mr.—On the Ecbolic Action of Pennyroyal. (*Brit. Med. Journ.*)

269. Axtell, Dr.—On a case of Atropine Poisoning. (*New. York Med. Journ.*, Feb. 1890.)

267. *Moore on Some Obscure Cases of Sudden Death Revealed by Post-mortem Examinations.*—Dr. Moore contributes an interesting article on the subject of aneurisms and their connection with cases of sudden death. One case is recorded of a blacksmith, aged 45, who was found dead at the foot of the stair leading to his lodgings. On *post-mortem* examination, blood was found extravasated into the left to the cerebellum, and down under the membranes over the medulla. On carefully washing away the blood, a small ruptured aneurism, not much more than twice the thickness of the artery of which it formed part, was discovered in a branch of the basilar artery. This artery is very rarely subject to aneurism. One of the most common forms of sudden death is a small pouched aneurism at the origin of the aorta, behind a segment of the aortic valve, generally the posterior one, which bursts into the pericardium. Aneurism of the thoracic aorta, generally gives indications of its presence, but in many cases a correct diagnosis is very difficult. The following case is a good illustration:—A musician, aged 37, who was apparently healthy and a good athlete, consulted his medical man about a pain in his back, which came on suddenly after performing some feats on the cross-bar. His doctor could not detect any symptoms of aneurism, but lest he might have injured the aorta, he advised him to rest for some weeks, and to abstain from violent exercise for some months. This advice was faithfully carried out, but about ten months afterwards the patient was playing at the piano when he suddenly fell back dead. On *post-mortem* examination a ruptured aneurism of the aorta was found over the ninth and tenth dorsal vertebræ. Only a month before his death this patient insured his life and passed for a "first class" policy. Another curious case is recorded. A man aged 43 was admitted into hospital, complaining of pain in the region of the lower dorsal vertebræ. He was carefully examined by four eminent physicians, who came to the conclusion that the man was malingering, and they ordered him to leave the hospital the next day; during the night,

however, the man threw himself out of window, and fractured his skull. On *post-mortem* examination a large unruptured aneurism of the aorta was discovered corresponding to the situation of the pain complained of. RICHARD NEALE, M. D.

268. *Marshall on the Ecbolic Action of Pennyroyal.*—" Pennyroyal," says Taylor " is not described by any authority as an emmenagogue or ecbolic or as a substance having any abortive or noxious properties." To this statement Dr. Marshall thinks exception ought to be taken. There is a widespread popular belief to the contrary effect and Dr. Marshall has met with several married women who have assured him that pennyroyal would bring on the catamenia when suppressed, and he once met with a case of abortion in which the severe flooding, collapse of the patient, and expulsion of the ovum were traceable to the action of three drachms of the essence of pennyroyal. He urges that the indiscriminate sale of this drug by chemists should be prohibited.

269. *Axtell on a Case of Atropine Poisoning.* —A married woman, aged 26, took with suicidal intent, nine pills, each containing one eighth of a grain of morphia. Dr. Axtell found her in a drowsy stupid condition with contracted pupils. Sulphate of zinc having failed to produce vomiting he injected one twelfth of a grain of apomorphine which produced free and repeated vomiting. He then injected ten minims of a four per cent. solution of atropine under a misapprehension as to its strength. Finding out his mistake at once he administered coffee and brandy; the pupils began to dilate and in ten minutes were fully dilated. At first she remained stupid and drowsy, but in less than an hour she became restless and delirious, she could not be kept quiet and alternately used bad language and laughed, the pulse went up to 120 and became very weak, there was desire to micturate, but the patient could not pass any urine; a prominent symptom was a constant desire to scratch and claw at her skin. The restlessness and delirium continued, and the patient wandered about for some seven hours and was then pursuaded to go to bed and fall asleep. The treatment consisted in the administration of brandy partly by the mouth and partly by injection, ether was also used subcutaneously. Her recovery was steady, but dryness of the throat persisted for some days and the pupils remained dilated for a week.

Ophthalmology.

RECENT PAPERS.

270. HARLAN, Dr.—On Hysterical Blindness of Ten Years' Duration in a Healthy Subject. (*Philadelphia Med. News, Jan.*, 1890.)

271. GUTTIEREZ-PONCE, Dr. — On a Case of intense Photophobia Cured by Direct Anæsthesia of the Casserian Ganglion. (*France Med.* Feb. 1890.)

ART. 270. *Harlan on Hysterical Blindness of Ten Years' Duration.*—Before describing this case that had lasted for 10 years, Dr. Harlan gave notes of a rather delicate-looking boy, æt. 11, who was represented to have become blind in the right eye about 18 months before. After the disease had resisted the skill of the family physician for some months, the patient's father was recommended to " try electricity," and took him to a " professor" of that science. The result of one application was an entire restoration of vision. The cure lasted, however, only for a few weeks, when the remedy was resorted to again, with the same result. After this history had repeated itself a number of times, the father, as a measure of economy, invented an apparatus of his own, and wound up his son's vision as often as it ran down. There was a suspicion of deception in this case, but not verification. In the next case reported, that of a tall, well-developed man, struck in the right eye 10 years previous to being seen, great pain followed and he was long under treatment before seeing Dr. Harlan, who found ophthalmoscopic appearances normal. In the right eye, he stated that there was no light-reflection from the ophthalmoscopic mirror; but the appearance of the eye was natural, the pupil responded to light, and the ophthalmoscope showed absolutely nothing abnormal but a low degree of hypermetropia. His appearance and manner were so utterly at variance with any suggestion of hysteria, or any kind of nervous derangement, that the suspicion of it did not at first occur. At the second visit, with both eyes fully under the effect of hematropine, ophthalmoscopic examination gave the same negative result as before. The mydriatic revealed a latent hypermetropia of 1.25 in the left eye, which had been the cause of the asthenopic symptoms. As a last resort, a prism with base down was held before the left eye, and double images of a gas-jet were at once admitted. This, of course, proved that both eyes saw; how well the right could see was easily shown by a simple test which has never yet failed in similar cases. A + 1.25 glass, which merely corrected the error of refraction, was placed before the right eye, and before the left a + 4 D., which excluded that eye from distant vision without the knowledge of the patient, and he was directed to read the test letters at 20 feet. He read No. 25 without hesitation—of course, with the blind eye. The left eye was then closed and his attention called to what he was doing. His surprise was equalled by his joy at the discovery, and both were evidently genuine. There was no suspicion of a conscious deception on his part; in fact, he had been ready to seal his good faith by the sacrifice of his eye. The fact that the pupil of the right eye responded to light, ought at an early date to have excited suspicion that the eye was not blind, as reflex pupillary reaction in a blind eye may be considered a physiological paradox.

RICHARD NEALE, M.D.

271. *Guttierez-Ponce on a Case of intense Photphobia Cured by Direct Anæsthesia of the Casserian Ganglion.* —A child of 13 years of age came under treatment in August last with palyctenular conjunctivitis keratitis, and in Nov. the other eye became affected in the same way. All attempts to raise the lid in order to inspect the corea were violently resisted and gave rise to fits of sneezing. The photophobia was intense. The author then endeavoured to anasthetise the Casserian ganglion, by introducing into the external auditory meatus a small plug of cotton impregnated with chloroform, with the result that almost immediately the patient allowed the lids to be raised without a protest and without any tendency to sneeze. The same treatment was repeated on subsequent occasions, and was attended by the same success. The author concludes that the external auditory meatus affords an easy means of bringing remedies to bear in ocular affections of nervous origin.

Reviews.

Article 272.

Spinal Concussion. By S. V. Clevenger, M.D. F. A. Davis: Philadelphia and London (139, Oxford Street, W.), 1889.

The development of the great railroad industries in civilized countries has been attended with so many modifications and improvements in the life-course of nations that it is not surprising it should exhibit as part of its phenomena, the practical production of a new disease among those who have benefited by it. As a recognized entity in the nosology, spinal concussion, in the sense that it is now-a days understood, can hardly be said to have existed in the minds of physicians whose practice was regulated by the conditions of fifty or sixty years ago. Then the rapid journeys of the present were wholly undreamt of; the collisions and accidents that mark the history of railroad engineering, with their attendant evils of death, injury and disease, were unconceivable to our forefathers of a couple of generations back; and, as a consequence, the minor refinements, getrological and pathological science, which characterise our appreciation of the injuries associated with travelling in the present, were reserved for the discussion of a later, and in one sense, a more enlightened school of thinkers. Apart from the gross lesions occasioned by actual damage received by passengers in railway trains, and of which the evidence is afforded by fractures or dislocations of bones, and cuts, bruises and lacerations of the soft parts, the injuries produced by accidents on the line include also certain disturbances of the nervous mechanism of the body, of which no palpable structural proof is present, either during life or after death, but of which the effects are often only too manifestly apparent in the long train of symptoms leading through nervousness, irritation, restlessness, debility, mental inefficiency, even to paralysis and hopeless inaction. Naturally, the gradual recognition of these sequelæ as dependent on changes produced in the nervous system of individuals subjected to the shocks of collisions, etc., on railways, led to an attentive study of the subject in all its bearings, and Mr. Erichsen, the well known surgeon of University College, first placed it prominently before the profession in his work on spinal concussion, published in 1864. For many years the views therein expressed formed the basis for most of the work in the same connection, although the painfully extensive gaps in our knowledge of the anatomy, physiology and pathology of the cord were meanwhile being rapidly bridged over by the researches of a whole school of earnest investigators. Dr. Clevenger is a staunch admirer of Erichsen, and strikes sturdily and uncompromisingly at his opponents. The more recent book of Mr. Herbert Page, in which Erichsen's views are freely contested, being severely handled in the work we have under review. The older English surgeon assumes the position that railway accidents are efficient causes of spinal concussion, the results of which may be so serious as to lead to incapacity for the duties and pleasures of life on the part of the injured individual; although there may be at no time any visible lesion, either of the cord or of its surroundings at all comparable with the effects produced. Mr. Page assumes the position that the risk of injury to the cord is infinitesimal, because of the security it enjoys through its bony, ligamentous and membranous protection; and he concludes that those cases of injury as the result of concussion, which are not in reality instances of malingering, owe their causation to actual lesions of the cord or its surroundings. Dr. Clevenger very pertinently remarks in this connection on the rashness of such a statement, since even now we are unable to assign any demonstrable change in the medulla in association with diseases which must of a necessity originate in changes of some kind or another set up in that organ. He naturally enough instances the occurrence of acute ascending paralysis in illustration of his point, and he is certainly justified in insisting that while such a terrible disease as this may exist without leaving any structural trace of its ravages in the organ principally at fault, we may well be content to accept the possibility of lesser changes being consequent also on molecular alterations in the nervous centres. A considerable portion of Dr. Clevenger's volume is taken up with a review, historical and critical, of the contributions of various authorities on the subject of spinal concussion, the valuable labour of Oppenheim being surveyed with especial fulness. In dealing with the views of this observer, he expresses disappointment that his own theory of the concurrence of the spinal sympathetic system in the production of organic damage was not also an outcome of Oppenheim's investigations, though credit is assigned both to him and to Erichsen for having approached the truth as it appears to Dr. Clevenger. The theory of the latter is something more than ingenious, inasmuch as examination of its details brings into prominence the probability that the explanations it offers of numerous associated phenomena may prove to be the true one. Briefly, the theory which our author propounds, and the enunciation and defence of which constitute the main *raison d'être* of his book, is to the effect that the train of evils following on spinal concussion, without discoverable lesions sufficing to explain the results produced by it, are the outcome of disturbances originating in the sympathetic nervous system primarily, and in the vasomotor apparatus of the cord secondarily. How much support of this view is to be obtained from the evidence afforded by physiology and pathology will be at once seen, and it is highly probable that, studied in the light that such a chain of reasoning throws upon them, many of the obscure relations of cause and effect, summed up in the loose term "spinal concussion," will speedily be denuded of the mantle of mystery now surrounding them. Dr. Clevenger, however, proceeds a step farther than this, and in a direction that it is scarcely possible to follow him willingly, for he seeks to give to the disease, which is characterised by the symptoms of spinal irritation, due to the causes mentioned, a name which is unfortunately selected on a principle that is regarded as unscientific by the spirit of the age. The adoption of personal names to distinguish diseases has, we learn from the history of medicine, been always a practical confession of ignorance concerning it; and though in the past such a mode of terminology may have been excusable, there is no longer the same reason or excuse for adopting the principle of nomenclature which influenced the selection of such synonyms as "Bright's Disease," "Grave's Disease," "Morbus Addisonii," etc., etc. Consequently, the proposition to designate "a certain symptom group" constituting "one form of the traumatic neurosis" as "Erichsen's Disease," is one that will meet with little sympathy from modern pathologists; though it may be, notwithstanding, a difficult matter to replace it with a strictly accurate scientific substitute. But this error of judgment, as it may be most fitly considered, does not in any way detract from the value of the work which its author has accomplished, and in the more personal sections of his book he deals with the "symptoms of Erichsen's Disease" in a manner that makes the whole subject clearly comprehensible, and opens up the road for the subsequent sections on diagnosis, pathology and treatment, all of which are discussed with a fulness and completeness that leave no essential detail unconsidered. The following passage from chapter ix., page 208, may with advantage be quoted as showing the author's conception of the scope of his own views on the disease of which he treats. It runs thus: "Erichsen's spinal concussion disease may be caused by falls, blows, jars, direct or indirect, such as are specially met with in railway collisions and derailments. Fright or wounds may cause a *few* similar symptoms, but by no means all of the phenomena that enable us to separate Erichsen's disease from other traumatic, psychical, or non-traumatic ailments. Cases in Erichsen's work, with the similar peripheral injury, cases of Oppenheim, and, indeed, those in the experience of any surgeon, satisfactorily set apart Erichsen's disease from other traumatic neurosis in which epilepsy, localised pain, and paralysis are the prominent features. Therefore, *Erichsen's disease is a group of mainly subjective symptoms of a nervous and mental nature, sufficiently characteristic to enable it to be recognised as a traumatic neurosis, distinct from other traumatic neuroses with which it may or may not be associated. The most common cause of Erichsen's disease is a concussion of the spinal column, including its contents and nearest appendages.*" The interesting subject of litigation, and the niceties of diagnosis involved in the detection of imposture, and the defence of legitimate claims for damages naturally forms an important part of Dr. Clevenger's study, and it is tolerably easy to see that he is himself inclined to the side of those who believe in the frequency with which serious mischief arises in apparently little injured cases. It is right to add, however, that he gives the reader the most ample facilities for perfecting himself in the use of the improved means for detecting both the effects of injury produced in the body, and the efforts of malingerers to simulate the symptoms of actual disease. The description given of electro-diagnosis, and the application of electricity to the class of neuroses in question, is a very valuable portion of the work, while its author's own experience enables him to enrich his pages with illustrative histories of great interest and instruction. As a contribution to the scientific and practical study of spinal concussion, Dr. Clevenger's able volume must take foremost rank as being the most exhaustive and comprehensive work on this increasingly important subject now extant in the English language.

ARTICLE 273.

The Evolution of Sex. By Prof. PATRICK GEDDES and J. ARTHUR THOMSON. "The Contemporary Science Series." Walter Scott. London: 1889.

THIS extremely interesting and suggestive book should be, and doubtless will be, read by all biologists, whether amateurs or specialists. That it may be as available as possible for both classes, by a judicious use of two kinds of type, the facts have been arranged into those of an elementary and of a more advanced character. We have seldom read a book in which it was possible to feel so continuous an interest. It abounds in novel and striking thoughts and theories, whilst the pleasant style and the numerous ingenious diagrams render it easy and attractive reading. The reputation which their other writings has gained for its authors is, we need hardly say, a sufficient guarantee that the facts contained in the book are accurately given and well up to date. Book i., which is called "Male and Female," gives us the author's views as to the essential difference between males and females, a view which, as we shall show, is worked out carefully in the succeeding chapters of the work. "According to the present view," they say, "males are stronger, handsomer, or more emotional, simply because they are males, *i.e.*, of more active physiological habit than their mates. . . . . The males live at a loss, are more *katabolic*, disruptive changes tending to preponderate in the sum of changes in their living matter or protoplasm. The females, on the other hand, live at a profit, are more *anabolic*, constructive processes predominating in their life, whence, indeed, the capacity of bearing offspring." As to the question of what determines sex, the authors, after having stated that over 500 theories have so far seen the light, incline themselves to the belief that nutrition is one of the most important factors. In support of this they cite, among other facts, the experiment of Girou, who "divided a flock of 300 ewes into equal parts, of which the one-half were extremely well fed and served by two young rams, while the others were served by two mature rams and kept poorly fed. The proportion of ewe lambs in the two cases was respectively 60 and 40 per cent." From this and other points with regard to temperature, etc., they reach the generalisation that "anabolic conditions favour preponderance of females; katabolic conditions tend to produce males."

Book ii. treats of sex organs, tissues, cells, and secondary characteristics, and still further develops the authors' theory which, in Book iii., is used to explain sexual reproduction. "Historically, fertilisation is comparable to mutual digestion, and though bound up with reproduction, has arisen from a nutritive want. With the differentiation of the elements on anabolic and katabolic lines, the nature of the fertilising act becomes more definite. The essentially katabolic male cell, getting rid of all accessory nutritive material contained in the sperm-cap and the like, brings to the ovum a supply of characteristic waste products, or katastates, which stimulate the latter to division. The profound chemical differences, surmised by some, are intelligible as the outcome of the predominant anabolism and katabolism in the two elements. The union of the two sets of products restores the normal balance and rhythm of cellular life." Menstruation and lactation obtain an explanation from the same theory. "If the female sex be, indeed, preponderatingly anabolic, we should expect this to show itself in distinctive functions. Menstruation is one of these, and is interpretable as a means of getting rid of the anabolic surplus, in absence of its consumption, by the development of offspring, just as it is intelligible that the process should stop after fertilisation, when replaced by the demands of the practically parasitic fœtus. In the same way, the occurrence of lactation, after this internal parasitism has been terminated by both, is seen to be reasonable. The young mammal is thus enabled to become what is practically a temporary ecto-parasite upon the unfailing maternal anabolic surplus, and when lactation finally ceases, we have the return of menstruation, from which the whole cycle may start anew."

The concluding chapters of the book break new ground—new, that is, in a professedly biological work, though very far from being out of place in its pages. Chapter xix. deals with the physiological and ethical aspect of the sex question. The authors very properly insist on the biological considerations underlying the relation of the sexes, which have not been sufficiently emphasised, to say the least, by recent speakers and writers on the "women" question. "A deep difference in constitution expresses itself in the distinctions between male and female, whether these be physical or mental. The difference may be exaggerated or lessened, but to obliterate them it would be necessary to have all the evolution over again on a new basis. What was decided among the pre-historic protozoa cannot be annulled by Act of Parliament." Chapter xx.—"Laws of Multiplication" deals with the burning question of over-population, and is remarkable for containing a fearless consideration of the propositions and methods of the neo-Malthusian school, which may be commended to the attention of those interested in the question, and especially to medical men, upon whom it is so frequently forced. We have drawn somewhat largely in this notice upon the authors' pages, and we have done so because we have wished that their views should be given in their own words, but we can assure our readers that a multitude of points remain unnoticed, which yet are equally worthy of consideration.

ARTICLE 274.

A Text-Book of Human Anatomy. By ALEXANDER MACALISTER, M.A., M.D., F.R.S., F.S.A. London: Charles Griffin & Co., 1889.

THOSE who are familiar with Professor Macalister's earlier works, and notably with his two books on invertebrate and vertebrate morphology, will not be surprised to learn that his human anatomy is a storehouse of facts and observations, many of which are quite new. The last word we have used strikes the key-note of the book; it is, in every way, a thoroughly original work, and as an important contribution to the science of anatomy we welcome it, and congratulate its distinguished author upon the result of his labours. How great these results have been can scarcely be judged by one reading of the book. Indeed, it would be no exaggeration to say that it consists of the carefully selected results of the author's many years faithful and persevering work in the dissecting room and laboratory. From their novelty and intrinsic importance, the portions of the book which will, doubtless, attract most attention are those dealing with the morphological side of the subject. Anatomy, it is now generally recognized, should be presented to medical students under two aspects, morphological and practical; nor should the natural anxiety of the teacher to insist, in his instruction of those who are to be physicians and surgeons, upon the importance of the latter, lead him to neglect that only sure foundation of embryology and morphology, without which anatomy ceases to be a science and falls to the level of a mere exercise of memory. The practical side of anatomy is represented by various admirable books. Apart from the monumental work of Tillaux, we have in our language Mr. Treves' handbook, and others fully sufficient for the needs of the student of medicine. But the morphological side has been far too much neglected in text-books, perhaps partly because it has not appealed to the majority of examiners in anatomy, and has therefore been passed over by the teachers. Professor Macalister's work removes this reproach, and we should like to refer any reader anxious to form an opinion on this point to sections such as that dealing with the development and morphology of the muscular system. For various reasons professional anatomists will welcome a morphological text-book. In the first place, it lays before students for the first time facts and deductions, many of which were entombed, so far as the ordinary reader was concerned, in monographs and proceedings of societies, or were to be found only in foreign and untranslated works. Again—and the second reason is no less cogent than the first—the appearance of this book can scarcely fail to attract a little attention on the part of morphologists to human anatomy as a subject worthy of notice. The remark may seem strange, but it is certainly true that the attractions of invertebrates have exercised so so powerful a fascination over the minds of modern morphologists, that "poor Homo," as some one calls him in this connection, has been of late years quite out in the cold. Indications are not wanting, however, that this period of neglect is passing away. The foundation and work of the Anatomical Society, which has been such an unqualified success, is one, and Professor Macalister's book another. The book, as we have said, is a highly original one. It is crammed with facts, and it is of considerable size; it is, therefore, scarcely to be wondered that there should be points in this, the first edition, in which improvement is possible. We shall venture to mention a few which have struck us in the course of our reading. In the first place, we think that a little further sifting of the matter, as distributed between large and small type, is required. This remark applies especially to the sections dealing with osteology. The "bones" are the first portions of anatomy which the student has presented to him, and we fear that the average man would have great difficulty in getting a satisfactory hold of this part of his subject from the mass of facts brought under his notice. We should like to see, especially in this part of the book, every fact which is not absolutely essential to a sound practical knowledge of the subject placed aside in the smaller type for a more mature period of study. In our opinion, the student ought, first of all, to obtain a grasp of such points in connection with the bones as are essential to intelligently carrying on his dissections, and then to adorn the nakedness of his edifice of knowledge with the mouldings, crockets and finials which the small type should afford him. In the second place, whilst fully recognizing the author's desire to keep his book within bounds of size, with an eye to portability and general usefulness, we must confess that we should like to see some of the paragraphs and sections considerably expanded. We are afraid that most students would find some parts, and this especially applies to some of the developmental statements, unintelligible without the aid of a commentary or commentator. Finally, we should like to see the index reconstructed and further expanded. In a work so full of facts, a thoroughly complete index is absolutely essential. We cannot omit calling attention to a statement in the preface which runs thus:—"I hope at some future time to set forth in order what I have here been obliged to omit—a complete catalogue of recorded varieties and their statistics, and a detailed history of the progress of anatomical discovery." Most professional anatomists, we suppose, have their own private working lists of recorded variations, but how many of us must at one time or another have yearned for a book dealing with the whole subject of variations on the line of the "Catalogue of Muscular Abnormalities" which Professor Macalister gave us years ago. No one could be more competent than he to complete his work, and we hope he will make no long delay in doing so.

Bertram C. A. Windle, M.A., M.D.

Article 275.

Pathological Anatomy of Diseases, arranged according to the Nomenclature of Diseases of the Royal College of Physicians of London. By **Norman Moore**, M.D., Fellow of the College, and one of the Curators of its Museum, Assistant Physician and Lecturer on Pathological Anatomy to St. Batholomew's Hospital, &c. London: J. S. A. Churchill.

To the student's or practitioner's library, a good handbook of morbid anatomy is ever a valuable addition. The student receives at his medical school instructions in the elements of pathological histology. He cannot, however, be expected to master its subtleties except he remain all his life more or less of a pathologist by profession. As for the practitioner, the very mention of microscopic pathology alarms him. He lives under conditions where true proficiency in that branch of science can hardly be maintained. In the case of an allied department of knowledge, morbid anatomy, the case is otherwise. Nobody denies that the student ought to acquire a substantial knowledge of the appearances of sick persons and diseased organs. Every practitioner knows that the student's accomplishments in that direction must be kept up after qualification. The necessity for making, or giving an opinion on, a *post-mortem* examination may occur to any practitioner when he least expects it. To a man long unaccustomed to work of the kind few professional duties are more irksome than a necropsy. Yet upon a necropsy he may have to stake his professional character before a patient or in a court of justice. Lastly, any person engaged in the practice of any department of the profession may come across some rare or newly distinguished type of disease upon which he is compelled to seek enlightenment.

In the above remarks certain wants, and what is more, well-recognized wants, are implied, and Dr. Moore's *Pathological Anatomy* is based upon the fact that such wants exist. This manual is an excellent guide to the *post-mortem* room, a trustworthy epitome of the naked eye features of disease. The first pages are devoted to directions for performing *post-mortem* examinations. The instructions for filling up death certificates are particularly useful—"good practical work," as the practitioner would say. Everybody will agree with the author's observation: "It is important to remember that most valuable additions may be made to pathology by the examination of cases of common diseases, and that it is a mistake only to examine rare cases."

Turning to the chapters devoted to diseases of different organs, we may select the tenth, on the nervous system, as especially well prepared. Puzzling terms, more or less new or "special," such as "pachymeningitis," "disseminated sclerosis" and "poliomyelitis" are carefully explained. The maintenance throughout of the nomenclature of the College of Physicians, an essential feature of the manual, indeed a part of its very title, has involved the exclusion of certain synonyms in general use. The two "tabes" might have been mentioned, especially tabes dorsalis; instead of the exclusion of "syringomyelus," its distinction from "hydrorhachis" should have been noted, although both these diseases are pathological subtleties, not so important as regards the aim of this manual as valvular disease and phthisis.

In the chapters on specific fevers and other general complaints, the lessons which are to be expected in different organs are detailed with great precision. Another good feature in this manual is the system of notifying the parts most subject to infection, and the primary carcinoma of different organs, by means of specially marked tables. The illustrations are of very unequal merit. It is unfortunate that the appearance of the surface of the kidney in the different forms of nephritis are so difficult to represent by means of woodcuts, as it is of high importance that practitioners who make necropsies should have a clear knowledge of the changes which the kidney undergoes in inflammation and in chronic disease of the lower part of the urinary tract. Perhaps Dr. Moore and his artist, Mr. Leonard Mark, may overcome the difficulty in a future edition.

The right of the author to compile his manual rests on a very firm basis, for Dr. Moore has taught pathological anatomy for ten years, and has made over 2,360 *post-mortem* examinations in the course of that space of time. *Pathological Anatomy of Diseases* is not the product of a tyro who writes before he learns; it is the work of a teacher of great experience. We have already shown that, in every respect, it exceeds in merit the average manual.

Alban Doran.

Article 276.

An Experimental Study in the Domain of Hypnotism, by Dr. R. **Krafft-Ebing**; translated from the German by **Charles G. Chaddock**, M.D., New York and London: G. P. Putnam's Sons, 1889.

It is no marvel that, as Prof. Krafft-Ebing tells us, that the first edition of this pamphlet was soon exhausted, though we scarcely think that its readers were confined to scientific circles. A favourable accident brought to the observation of the author, in his clinique for nervous diseases, a person "extraordinarily suitable" for the study of hypnotism. This "hypnotic wonder" was a woman, named Ilma S., of 29 years of age, brought by the police to the asylum, at Graz, in order that her mental condition should be reported upon. She was accused of theft, apparently committed in the hypnotic state. Her account of herself was quite romantic, though naturally a little more favourable than facts warranted. The first extatic fit was brought on by horror at seeing a raft break in the river Theiss, and a number of people drowned. She was educated at a convent, and according to her own account, left in disgrace, owing to a theft which an intriguing nun made her commit in a state of hypnotism or somnambulism. After this she stole money from her father, and left home, leading a wandering life. Amongst her various disguises she assumed the male garb. This led her to be associated with some men whose conduct cured her of a decided attachment to that sex. This she assigned as the cause of perverse feelings towards her own sex, as she needed to have some loved person upon whom to depend. She was visited by attacks of severe hysteria with right hemianaesthesia, which from her own account, seems to have lasted for about two years. Ilma S. became the subject of very careful study on the part of Dr. Krafft-Ebing, his colleagues and assistants. She was in a very exalted mental condition, and emotional excitement was frequently followed by severe hystero-epileptic attacks, after which "she is for days mentally dull, sees everything as a yellowish-red color; has rushing and humming in her head, frightful visions, headaches and temperatures as high as 40°." Although Ilma is of more than usual intelligence, there is a weakness of power to reproduce original conceptions, and she has numerous delusive beliefs, owing to her confounding the fanciful with the real, and mixing up place and times in incorrect sequence. When we consider that the observations related were conducted with as much exactness as was possible, under the circumstances, and by one so well prepared by previous study and experience as the renowned professor of psychiatry, at Graz, the statements in this little treatise will surely attract attention. Amongst the remarkable observations recorded is the production of a blister by the application of pieces of paper to the skin under the influence of suggestion in the hypnotic state. Pieces of metal were also applied to the skin with the suggestion that they were burning hot, and red marks were thus imprinted on the surface. We read "It was impossible to find out who had impressed a pair of scissors on her and suggested they were hot, it must have been one of the students." It is a sad example of the great effects of suggestion; but a sceptical person might perhaps say that they were hot. In statements likely to be scrutinised an observation like this is of no use. Dr. Krafft-Ebing remarks "that the results of suggestions in the domain of the naso-motor and trophic nerves, and the heat-regulating centres, remain for present science inexplicable. That these effects are not simply possible by means of the psychial influence (command) of the experimenter, but also that they may be a result of hallucinatory suggestion, is taught by the experiences of May 5th. These form a bridge to the domain of anto-suggestive influence over the functions of the body, the occurrence of which within the limits of neuro-pathology (*e.g.* in hysterical patients in the form of bloody sweat, stigmata, etc.) cannot be doubted, but is still too little appreciated." The following observation is of importance: "Of the greatest, *i.e.* forensic, interest is the fact empirically discovered with this patient, that as soon as she undertakes to carry out a post-hypnotic action, so far as it includes a state or complicated action, she passes into auto-hypnosis, that is, the suggestion has a hypnotising effect as soon as it becomes actual." It is a cause of regret that no competent experimenter appeared in our islands to follow up the study of hypnotism, so successfully commenced by Braid nearly half a century ago. The prosecution of this interesting line of research has been left to French, Italian, and German physicians. Even our translations, like that of Bernheim and the present work are due to the activity of our American cousins. We have not had an opportunity of comparing the translation with the German; but it is clear and in some places evidently very close to the original.

W. W. IRELAND.

ARTICLE 277.

A Practical Treatise on Eczema and its Treatment. By M. J. RAE, M.D. London: Churchill. 1889.

CHRONIC ailments are, as a class, nearly as trying to the practitioner as to the patient, and amongst them there is, perhaps, no class so trying as the commoner affections of the skin. Eczema, particularly, being an affection of uncertain duration, disagreeable, and often distressing to the patient, and an affection, moreover, from which neither age nor sex is exempt, possesses for the medical man an interest which is only too often quickened by the consciousness of his inability to rid the patient of a malady which the latter is only too apt to suppose ought to be effectually under the control of his medical attendant. Books on eczema, therefore, if written conscientiously, whether as the result of long personal experience, or as epitomes of the literature of the subject, are always more or less welcome to the profession. The special characteristic of Dr. Rae's book is that it is the product, to a large extent, of a very careful and exhaustive study of the literature of eczema up to the very latest date. Not only has Dr. Rae conscientiously perused the periodical literature both of this and other countries, but he has incorporated in his book the opinions of the authors who have most recently written text-books on diseases of the skin. The work is, moreover, the product of a writer whose personal experience has been sufficient to enable him to thoroughly comprehend the various problems which are discussed in the large mass of current dermatological literature, and he has succeeded in placing the results of his studies before his readers in simple and intelligible language. The views of the various schools receive impartial exposition at his hands. The diet which ought to be observed by eczematous patients, according to the views of the French and some representatives of the English schools, is expounded in detail, whilst a large choice of internal remedies are placed before the reader.

Dr. Rae is one of those who consider that eczema is often associated with gout and depends upon the same cause, and that sometimes the skin affection may be the only manisfestation of the existence of a gouty diathesis. Eczema he considers to be largely dependent upon errors of digestion, and believes that acids, acid fruits, game in high condition, spirituous liquors, especially brandy, are frequent causes of eczema. These views are not new, and we are inclined to believe that they have been adopted by Dr. Rae more as the result of his reading than as of his own direct personal observation. In any case, it cannot be denied that in eczematous people whatever weakens the digestion is apt to injure the health, and that whatever injures the health may predispose to eczema.

In the long chapter on treatment, Dr. Rae discusses the action or all the various drugs that have been recommended in this disease. Arsenic, sulphur, mercury, antimony, cantharides, alkalies, mineral acids, cod-liver oil, all receive their due notice. In reference to the administration of preparations of tar and carbolic acid, however, Dr. Rae remarks that his own experience of them is not sufficiently large to confirm the favourable opinion of their curative virtues that has been expressed by other authors. Various local remedies receive full notice, and this part of the book we specially recommend to the reader as well worthy of consultation in the emergencies of daily practice, formulæ being fully given, as well as the various modes of applying both the better known and the more recently introduced applications. Practitioners will find that Dr. Rae's book deals with the details of the treatment of eczema more fully than conditions of space have made possible in the case of the writers of ordinary text-books on skin diseases, and on this account the book is well worthy of perusal by those who are specially interested in the treatment of this disease.

Article 278.

Hunterian Lectures on the Morbid Anatomy, Pathology and Treatment of Hernia. By Charles Barrett Lockwood, F.R.C.S., Hunterian Professor, Royal College of Surgeons of England. London: H. K. Lewis, Gower Street, 1889.

The three lectures here represented, and collected in one volume, were delivered in the summer of last year, by the Hunterian Professor to the Royal College of Surgeons. Mr. Lockwood, who has, as is well known, paid much attention to developmental changes in the parietes and viscera of the abdomen, and also to the morbid anatomy and pathology of forms of hernia of congenital origin, considers in this, his latest course, how far the peritoneum and suspensory apparatus of the abdominal contents are concerned in the pathology of hernia, and ascribes the bearing of such researches on the prospects and indications of operative interference in cases of non-strangulated and reducible hernia. The thanks of the profession are due to Mr. Lockwood for having presented, in a convenient form, the results of his painstaking endeavour to settle, by strictly scientific investigation, the disputed question as to whether, in the development of hernia, the abdominal parietes, or the attaching membranes of the displaced intestine, are primarily at fault. Having first, by a long series of autopsies, fixed a standard of comparison by which he might be able to judge of the elongation, prolapse, or other abnormality of the mesentery, and also of the range of downward movement of the intestines, Mr. Lockwood proceeded to make out what deviations from this standard occurred in cases of hernia, and to study their causes and pathology. The results of these investigations tend, with regard to acquired hernia, to favour the views of those who hold what is called the pathological theory as to the predisposing causes of hernial protrusions, and who believe that such protrusions are due to some abnormal or morbid condition of the suspending peritoneal membranes of the intestines. This abnormal condition, however, in most instances, Mr. Lockwood believes, is not so much an actual elongation of the mesentery as a prolapse or gliding down over the lumbar vertebræ of the root of this membrane, such prolapse being attributed for the most part to failure in the suspensory muscle of the duodenum and mesentery; although, as we think, too much importance is attached in these lectures to the part played by a somewhat obscure muscle, which has been overlooked by most anatomists, and which, in Mr. Lockwood's opinion, has not been correctly described, even by Traitz, its discoverer. There can be no doubt that the condition of prolapse of the mesentery, which is here so clearly and fully described, is one that cannot be ignored as a factor in the causation of acquired hernia. Congenital hernia, on the other hand, Mr. Lockwood holds, is not, as a rule, caused or influenced by any abnormal condition of the suspensory apparatus of the intestines, but is due rather to a developmental defect in the wall of the abdomen. For this reason congenital herniæ are regarded as being the most suitable for curative operations in those cases in which cure has not been attained by truss pressure. In acquired hernia, on the other hand, except in those instances supposed to be very rare, in which there is neither prolapse nor elongation of the mesentery, the indications are against, rather than in favour of, any operation on the abdominal wall, since such treatment is unlikely to afford permanent cure, or to enable the patient to dispense with the use of a truss. In the lecture on operations for the radical cure of hernia, allusion is made to atrophy and sloughing of the testis, which, though seldom mentioned by previous writers on the subject, are, according to Mr. Lockwood, by no means imaginary dangers. Such results though probable, and, indeed, one would suppose very likely to occur after the interference with the blood supply and the connections of the testis necessitated in some operations on large herniæ, are, however, of rare occurence. Sloughing of the testis and scrotal abscess may undoubtedly result from free division of the spermatic vessels; but whether atrophy often results as a consequence of compression of these vessels through constriction of the inguinal ring, or by cicatricial retraction, remains to be proved by observations of old cases. To those who are interested in the subject of hernia and its treatment by operation, we can recommend these lectures as certain to afford much information on doubtful points, and also valuable suggestions as to the direction of future enquiry. We wish the lecturer had been more lucid in the arrangement and teaching of this information, and that there were fewer interruptions in the course of his statements, and also fewer repetitions.

Article 279.

Lectures on the Diseases of the Throat and Nose. By Charles Sajous, M.D. F. A. Davis: Philadelphia and London (139, Oxford Street, W.), 1889.

In these lectures, Dr. Sajous has contrived to present, within a moderate compass, a concise description of the principal diseases of the throat and nose, together with an account of the methods employed in the diagnosis and treatment of diseases of these regions. This work is well illustrated by a large number of woodcuts, and by eight coloured plates. These latter are partly anatomical, and are partly representations of pathological states. The drawings have been almost all executed by the author himself, and strike us as being, in general, remarkably accurate. The first portion of the work is devoted to the diseases of the nose. Diseases of the pharynx are next taken, and, lastly, those of the larynx. Preceding the description of the diseases of each region is a short account of the anatomy of the parts, and of the methods and appliances used in the diagnosis and treatment of the region in question. The book is throughout very readable. Discussions on controverted points in etiology and pathology have been avoided, and the more practical points in diagnosis and treatment have been especially dwelt on. It has often seemed to us that the anatomical chapters in many special treatises might, with advantage, have been omitted, and the space thereby gained have been devoted to other matter.

We allude, chiefly, to short treatises, such as this work of Dr. Sajous, and we think his book is no exception to the rule. There is nothing in these anatomical descriptions which the student or practitioner might not be expected to know, or which he could not turn up in a moment in any anatomical work, and some of them are so meagre as to be of little real practice value; indeed, some of the descriptions are so condensed as to be scarcely intelligible. Take, for example, the account given by the author, at p. 13, of those very important parts, the middle turbinate body, and the corresponding meatus. "The middle turbinate body, much larger, and with its edge curled under, stands out obliquely downwards, and forms the middle meatus, into which the infundibulum, the canal of the frontal sinus, and the orifice of the antrum immediately adjoining, have their apertures; the former being partially hidden by a projecting fold of mucous membrane, and the latter contracted to a small circular opening." Such a description as this really conveys no knowledge whatever. If authors must needs prefix these customary brief anatomical sketches, they would do better to dwell somewhat fully on the points which have a practical bearing, and which are often only briefly dealt with in anatomical books, and to touch lightly upon, or altogether omit, the ordinary routine anatomical descriptions. Dr. Sajous treats of rhinitis under the following heads: acute rhinitis, simple chronic rhinitis, hypertrophic rhinitis, and atrophic rhinitis, and as special forms he describes syphilitic rhinitis, and scrofulous rhinitis. In the treatment of acute rhinitis we notice that the author speaks highly of the application of a four per cent. solution of hydrochlorate of cocaine. He renews the application as soon as the effect passes off, and after a third application he states that the stuffiness does not generally recur. Cocaine has been largely tried by other observers in acute rhinitis, but it must be admitted that their experience has not been so favourable. The stuffiness is, indeed, relieved for the moment, but it soon returns, and repeated applications of cocaine are ineffectual in keeping it under, and, indeed, the drug loses its effect after a time; still, occasionally, the relief afforded by a single application of cocaine is both marked and durable. The distinction which the author draws between atrophic rhinitis, and scrofulous rhinitis, does not appear to us to be very clear. The symptoms described are in each case the same, and it is admitted that in scrofulous rhinitis, an inspection of the nasal cavaties will generally reveal a condition resembling somewhat atrophic rhinitis. For our own part we do not believe in the existence of scrofulous rhinitis as a disease *per se*. Some of the cases included in the author's description we should term simple rhinitis, occuring in scrofulous subjects, and exhibiting the tendency to purulent secretion which is usual in such subjects; other subjects we should hold to be examples of atrophic rhinitis. Under the title of periodical hyperœsthetic rhinitis, the author describes hay fever and the various allied forms of coryza. For the production of an attack of hay fever he holds that three conditions are essential; firstly, an external irritant, secondly, a predisposition on the part of the system to become influenced by this irritant, and, thirdly, a vulnerable or sensitive area through which the system becomes influenced by the irritant. The whole subject of hay fever and allied conditions is fully and clearly discussed, and the efficacy of local treatment of the mucous membrane by caustics, or the galvano-cautery, is rightly insisted upon. The term chronic posterior nasal pharyngitis, which the author applies to the diseases usually known as post-nasal or naso-pharyngeal catarrh, is appropriate, and in many respects superior to the old names; but it is doubtful if it can be made to supplant these. The account of the diseases of the naso-pharynx, and pharynx is, on the whole, clear and concise; but in many cases almost too brief. This is especially the case with the affection known as adenoid vegetation, described by the author under the head of hypertrophic posterior nasal pharyngitis. The description of the symptoms and treatment of this very common and important malady is altogether too short. In the brief account of the treatment no allusion whatever is made to the plan, very generally adopted both in America and this country, of administering an anæsthetic, and clearing out the naso-pharynx at one sitting. The portion of the book devoted to diseases of the larynx contains as good an account of the subject as could well be expected within the limited scope of the work. Here, as elsewhere, prominence is given to practical points, and theoretical discussions are avoided. A very good coloured plate, containing 24 figures, illustrates the laryngoscopical appearance of the parts in the normal condition, and in various diseased states. On the whole, Dr. Sajous' book will be found a very useful aid to the study of diseases of the nose and throat, by students and practitioners who have not the time to peruse the larger works on the subject.

ARTICLE 280.

The Neuroses of the Genito-Urinary System in the Male, with Sterility and Impotence. By Dr. R. ULTZMANN. Translated by Gardner W. Allen, M.D. F. A. Davis, Philadelphia and London.

THIS is a most useful and practical monograph upon a subject of wide interest. It treats of the management and successful control of a class of cases in male patients which are both difficult and refractory. The nervous apparatus of the genito-urinary system is of so complex a nature that surprise can scarcely be felt that it would be the seat of so many anomalous forms of disorder of function. In the pages before us the author successfully bases his remarks, in the first place, upon the pathological origin of these neuroses, and then having pointed out the *fons et origo* of the various disorders, he proceeds to discuss the means of cure. He draws attention to the fact that the exact connection between the nervous system and the functions of the urinary and sexual apparatus is still very little understood, and herein lies the difficulty which environs the management of the cases in question. The remarks which he makes upon the subject of the urine in neuroses in general, and especially in those of the genito-urinary system, are extremely good, and are worthy of careful perusal. He divides the neuroses of the urinary and sexual organs into three groups, according as they affect, sensation, motion, and secretion, and upon this classification he discusses the various disorders which are comprised in his subject. Those practitioners, for example, who are wishful for practical information about nocturnal incontinence of urine, will find a useful resume of the subject, and valuable details as to treatment, under the head of this complaint. Under the motor neuroses are classed pollutions and spermatorrhœa. On both these points the author has much to say, which is worthy of perusal. The book closes with a chapter on sterility and impotence. Although the work consists of only 160 pages, we think its usefulness would be increased both by a table of contents and an index. At all events, it would be well in the next edition to add one or the other.

ARTICLE 281.

The Electric Illumination of the Bladder and Urethra, as a Means of Diagnosis of Obscure Vesico-Urethral Diseases. By E. HARRY FENWICK, F.R.C.S., Eng. Second Edition. London: J. & A. Churchill, 11, New Burlington Street, 1889.

MR. HARRY FENWICK has worked ably and well at the subject with which he has specially identified himself, namely, that of the electric illumination of the bladder and urethra, by means of the endoscope, and the proof that the profession has appreciated his work is shown by the early call for the second edition of his book under the above title, in which he vends his experience. The clinical part of this new edition has been entirely re-written and much enlarged, and in this respect, therefore, adds greatly to the value of the work. The notes of the various cases recorded are on the most part very interesting, and unmistakably testify to the value of the introduction of electric endoscopy as a method of diagnosis. The author regrets that his manuscript must be to press before he had time to notice two able monographs upon electric endoscopy, which appeared from two able authorities upon the subject. One was by Dr. Nitze, the originator of the method, the other by Professor Geza von Autal, of Buda-Pesth. The book is fully illustrated with 44 wood cuts and 10 photo prints, the latter representing chiefly the appearances seen under the clay and wax-model system which the author has so well elaborated.

ARTICLE 282.

Clinical Lectures on some Obscure Diseases of the Abdomen. By SAMUEL FENWICK, M.D., 1889. J. and A. CHURCHILL, London.

IT is a pity that clinical lectures are not more often prepared with the care which mark these lectures, and with an equally definite object. The subject chosen is an excellent one, and the author has made good use of the materials at his disposal in the *post-mortem* records of the London Hospital, and in the hospital and private cases which have come under his own notice. We recognize the difference between these and the typical clinical lecture on an obscure case in the wards, when the lecturer has to balance many possibilities and probabilities, and, where too, his diagnosis must be uncertain, and he must say why so; but in the present instance the author has classified his cases, and, therefore, there is no doubt as to the diagnosis as far as the reader is concerned. There is, of course, a convenience in this plan, but it has its drawbacks, for the lectures read are rather formal and devoid of the charm of true clinical lectures; they leave nothing to the reader to work out for himself. The subjects chosen are "Perforation of the Vermiform Appendix," "Stricture of the Ileo-cœcal Valve," "Fœcal Abscess connected with the large and small intestines respectively," "Perinephritic Abscess," "Gastric and Perigastric Abscess," "Tubercular Peritonitis in the Adult," "Cancer of the Peritoneum," "Hydatids of the Peritoneum." These are all of great practical interest to surgeons and physicans alike, and the most recent advances in abdominal surgery, which the author in his preface seems rather to limit to ovarian surgery, have a tendency to make a careless observer more careless, under the idea that the surgeon's exploratory incision will safely settle all doubts. The timid man, too, who dreads to call in the surgeon, will find the author's observations of great value in helping him to see what is wanted in certain cases, and how to arrive at a knowledge of what is taking place. These lectures ought, therefore, to be very acceptable to the profession. That they are somewhat unequal in interest and force is not to be wondered at; but we should be inclined to criticize them as very often too statistical, and the advice as to treatment to err on the side of over caution. The mechanical causes of visceral disease would be also more prominent in the surgical mind, though, doubtless, not always correctly so. We should be glad to have heard the author's experience of fœcal-smelling abscesses, which are not due to perforation of the intestine, but to contact with it; and in the case of perinephritic abscess it seems to us that when the diagnosis clearly indicates the presence of a collection of pus, the sooner it is treated as an abscess is elsewhere, and evacuated with care, the more rational the treatment. Leeches and fomentations seem rather a proof of ignorance and uncertainty. It would be useful to find what does not appear to have yet been made out, whether the character of the symptoms will help us to determine the locality and extent of the abscess. These few remarks may show the scope and character of these lectures, and it is no small compliment to the work to say that we feel glad to be able to refer to it in cases of obscure disease of the abdomen which may require surgical treatment when diagnosed.

ARTICLE 283.

Clinical Lectures on Varicose Veins of the Lower Extremity. By W. H. BENNETT, F.R.C.S. Longmans and Co., 1889.

MR. BENNETT has published, in a book form, four clinical lectures, delivered at St. George's Hospital, upon this troublesome and common condition. Students are apt to underrate the importance of what appears to be a trivial ailment in the majority of cases, and there is no doubt the subject deserves the careful attention of a teacher, and especially in such lectures as these. In the outpatient room, and sometimes in the hospital wards, these cases are seen, and a table is here given of 574 cases seen by the author, and these are carefully analysed. As one might expect, the lectures do not form an exhaustive treatise, but are rather practical than otherwise, and there are many matters which are not usually found in the text books within the reach of most practitioners, so that the work is likely to be appreciated. The early symptoms of varix are carefully pointed out, and the possible errors of diagnosis exemplified. The causes are made to include especially a faulty congenital condition of the veins, and the different arrangement of valves near the saphenous opening considered. Treatment, either with the object of temporarily relieving the inconvenience, or of effecting a radical cure, occupies two of the four lectures, and these will doubtless prove most valuable, as the different forms of support, and the different kinds of operation, are pointed out as valuable for particular classes of cases.

W. W. WAGSTAFFE.

ARTICLE 284.

The Flowering Plant as illustrating the First Principles of Botany. By J. R. AINSWORTH DAVIS, B.A., Lecturer on Biology and Geology in the University College of Wales, etc., etc. London: Charles Griffin & Co., 1890.

THIS unassuming little work is "especially adapted for London matriculation, South Kensington and university local examinations in elementary botany," so that it addresses itself to a very comprehensive category of possible readers. The authors idea has been to illustrate the first principals of botany by means of common flowering plants, and the style has been as simple as possible, special attention to practical work being insisted upon. Inspeetion of the plan followed by the author shows that freedom from the tecknecalities which have made botanical nomenclature a bugbear for students, is by no means inconsistent with a highly scientific handling of a very interesting branch of science, and although the author disclaims auy intention of restricting his information to the requirements of any particular examining board, we can confidently recommend his work as a safe guide for all ordinary purposes. He commences by defining the scope and subdivisions of the subject, the characteristics of living as opposed to non-living matter, and the difference between plants and animals. He then briefly discusses the general principals of mesphology and physiology as a preliminary to the detailed description of the organs and physiology of plants. It is an excellent little work, well conceived, clearly printed, and copiously illustrated by means of woodcuts, themselves of wonderfully artistic merit.

Notes on Books.

ARTICLE 285.

Anæsthetics in Operations for Adenoid Growths of the Naso-Pharynx. By HENRY DAVIS.

IN a short pamphlet bearing the above title, Mr. Henry Davis, after mentioning the advantage to the operator accruing from having his patient anæsthetised, suggests that the following method be employed:—The patient lying on his back should have the head drawn over the table, so that the blood cannot trickle downwards into the larynx, but collects into the roof of the pharynx, which, with the head in the position above mentioned, forms a sort of cup, which not only receives the blood and fragments of adenoid tissue, but also admits of such being easily removed by sponging. Another advantage of the position of the head is, that it ensures the air passage being free, as the investigations of Dr. Howard prove that in such a position the epiglottis is raised from the larynx.

FRANCIS HAWKINS.

ARTICLE 286.

Leprosy and its Prevention, as illustrated by Norwegian Experience. By ROBSON ROOSE, M.D., etc. London: Lewis. 1890.

DR. ROOSE has observed many cases of leprosy in Norway, and has acquired from his intercourse with several Norwegian physicians much interesting information regarding the disease. Having learned from them that segregation in Norway has been followed by a diminution in the number of cases, he brings this view prominently before his readers. Not contented with the information he derived from Norway, the author has read with evident diligence much of the modern literature on the subject, and has given in this small volume short notices of the most important views entertained by practical workers in connection with the symptoms, pathology, and treatment of leprosy.

ARTICLE 287.

MR. THOMAS BRYANT has published his Bradshaw Lecture on Colotomy, in the form of a little book. The author does not consider the iliac operation easier than the lumbar when abdominal distension is present, although when the abdomen is flaccid, such may possibly be the case. So far as searching for the bowel, the lumbar operation has the advantage in the majority of cases. Mr. Bryant enters fully into the question if lumbar and iliac colotomy, and argues out Mr. Herbert Allingham's and Mr. Harrison Cripps' reasons for performing the iliac operation in a clear and concise manner, giving his own statistics and reasons for preferring the lumbar as a rule. The lecture should be on every medical library for reference when any information on the subject is required.

RICHARD NEALE, M.D.

ARTICLE 288.

The Natural History of Specific Diseases. By E. F. WILLOUGHBY, M.D. H. K. Lewis. 1890.

DARWIN'S great generalisation has more or less influenced the lines of recent research in every branch of biology. Of late, several observers have turned their attention to the evolution of diseases, especially those that are of specific type, and depend on the invasion of micro-organisms. For the purpose of such investigation, disease may be defined as "any deviation from that normal state of the organism, structural and functional, that we call health." Or, assuming an ideal standard of healthful life with Dr. Harry Campbell, we may speak of disease as "an abnormal mode of life." There can be little doubt that the microbes of specific disease have been evolved under the laws that bring distinct species into existence. Dr. Willoughby writes clearly on this point. "The first case of small-pox, or of syphilis—neither of which ever arise *de novo*—must either have originated in a creative act, or have been evolved from other pathological states, perhaps through a long series of developments, doubtless under insanitary conditions at present happily unknown. . . . . The problem of the origin of specific diseases is identical with that of the origin of species. . . . . Syphilis was probably evolved during a long course of promiscuous sexual intercourse, amidst foul and unhealty surroundings, through stages of more or less specialised venereal diseases, which in their turn grew out of virulent catarrhs." Other questions, such as "Immunity," are discussed. The "Natural History of Specific Diseases," however, is rather a big subject for the compass of a short essay. Indeed, the latter may be said to consist of a series of carefully written papers on various points rather than an attempt at a systematic review. The last twenty pages—one-third of the pamphlet—are devoted to practical aspects of the subject which, the author remarks, lie entirely outside the scope of the essay. The text is lightened with much incidental matter of interest. For instance, in a note on polymorphosis, the following occurs. "Dr. Lowe identified the *achorion* with the *aspergillus glaucus*, and Malcolm Morris and Henderson found that the spores of *tricophytou tonsurans*, cultivated artificially, assumed the form of *penicillia*, while those of the second generation reproduced ringworm on the human skin.

David Walsh.

Hygienic Preparations.

THE "LION" ESSENCE OF BEEF.

We are induced to call attention on the present occasion to this production, made by Messrs. Edge Brothers, Farringdon Road, E.C., owing to an important feature connected with it. Unlike other preparations of a similar character, the "Lion" essence is put up in glass bottles of a similar shape to a hyacinth glass, with an hermetically-closed top or cover. When first introduced, many in this trade contended it was a mistake, and that the contents would not keep fresh in glass. This has proved a fallacy, for the proprietors have in their possession many bottles (which may be inspected by anyone) that have travelled all round the world, and, therefore, severely tested by different climates, and that are as good to-day as when first bottled. These remarks apply to the other products of the firm, such as chicken essence, beef-tea jelly, real turtle soup, &c., all of which have been similarly tested. There cannot be any difference of opinion as to the superiority of glass for packing such delicate preparations, and, now that its security from deterioration has been proved beyond doubt, we anticipate a largely-increased demand for Messrs. Edge's specialities. Our opinion of them is well known, we subjected them to crucial tests soon after their introduction, and we are pleased to say they are as good, if not better, at the present time. A small pamphlet published by the firm, entitled "Feeding the Sick," may be read with interest.

The introduction of digestive agents to supplement and, if need be, to replace the natural ferments, has rightly been described as the most important advance in therapeutics effected for many years past. The next step, complementary to the use of zymine and similar agents, was the introduction of substances which should facilitate and simplify digestion while themselves nutrients of no mean order. This problem was solved when, by carefully conducted processes, conceived in the highest scientific spirit, it was proved possible to produce malt extracts rich in diastase and dextrins. These reflections occur to us after examining a sample of the Kepler Extract of Malt as at present prepared, forwarded for our inspection by Messrs. Burroughs, Wellcome and Co, which, for diastasic activity and nutritive properties, has few rivals, and is probably surpassed by none. The preparation is evaporated *in vacuo* at a low temperature, and the entire process turns on the main object, which is to obtain an extract of which the diastase has been neither used up nor destroyed in the course of manufacture. We have satisfied ourselves of the justice of the claims advanced in this respect; and the action may easily be observed by mixing a teaspoonful of the extract into a dish of thick oatmeal porridge at a temperature not exceeding 100° F. The liquefaction resulting from the conversion of the starch soon becomes marked, and the presence of sugar can readily be detected by the usual tests. This is a valuable hint in the preparation of gruel for invalids, since we are thus enabled to administer a partially digested product many degrees per cent. richer in nutritive properties than the ordinary crude "skilly" served up by untrained, if willing, hands. The whole value of malt extracts resides in this diastase, hence it is highly important to make sure, before ordering any particular preparation, that it really fulfils our requirements. As a matter of fact a very large proportion of the cheap extracts met with in the market are little else than treacle, devoid alike of nutritive properties and therapeutic effects. In no other department of pharmacy is there greater temptation to sacrifice quality to the desire to underbid for popularity, than in regard to malt extracts, seeing that but few of those who have recourse to them can, or will, take the trouble to verify the claims advanced. The well-known solvent effect of the Kepler Malt Extract on refined cod liver oil, has made the ingestion of this useful but disagreeable substance a pleasure instead of a penance. Although under the microscope no oil globules, or very few, can be seen, the presence of the oil is shown when a little water is added. This has for effect to throw the oil out of solution in the form of an exceedingly delicate emulsion. The digestion and assimilation of the oil is thus rendered certain and easy, patients derive the full benefit of both the malt extract and the oil, and the risk of "upsetting the stomach," which is always possible with the oil alone, is obviated. In short, the solution of cod liver oil in Kepler Malt Extract is an elegant, tasteful, and highly satisfactory product.

The latest addition to the arsenal of antiseptic agents is a product submitted to us by Messrs. Burroughs, Wellcome & Co., under the name of Iodic-Hydrarg. It has been largely tried as an antiseptic germicide for surgical purposes, and appears to have given great satisfaction. It is a heavy yellow powder, devoid of smell, and a 1/4,000 solution is equal in activity to a 1/12,000 solution of corrosive sublimate, over which, moreover, it has the very important advantage of being, markedly, less poisonous. Between two germicides of equal strength, no-one, now-a-day, would hesitate to choose the less toxic, since the comparative absence of the risk of causing serious, and even fatal symptoms, naturally enhances its value for practical purposes.

It is not an easy task to select from among the many valuable preparations of recent introduction by Messrs. Allen & Hanburys, those which call for special notice. Perhaps the most judicious plan will be to choose products, the value and activity of which can be easily tested. Foremost among them must come the Bynin (Malt) Preparations, beginning with bynin, a concentrated liquid extract of malt, which, while pleasant to take, retains the strengthening, nutritive and diastasic phosphates of malt in their entirety. Closely allied to this convenient preparation are Byno-Pancreatin and Byno-Pepsin. The former (Byno-Pancreatin) answers admirably for the preparation of peptonised milk, milk gruel, etc., the advantages of which, in the invalid dietary, are too well known to call for a more detailed description. In Byno-Pepsin we have a combination of the agents required for the digestion of both animal and farinaceous foods, and in this respect, as well as in the constancy of its activity, we have an ideal aid to natural digestion. Before leaving the malt preparations, we are fain to notice Byno-Phosphates, an agreeable and palatable modification of Parrish's well-known chemical food, in which the syrup is replaced by nutritious malt extract. This is specially recommended as a general tonic for debilitated children. The Malt Extract, prepared by this firm, is an excellent specimen of its kind, possessed of marked liquefying powers in starch, and it is utilised in the manufacture of their popular "Malted Farinaceous Food for Infants and Invalids," than which, no better food exists. The Malt Extract is also utilised in combination with cod liver oil, the disagreeable taste of which it covers, and the digestion and assimilation of which it facilitates. The oil and the malt blend perfectly together, and yield in bynol a homogeneous and taseteful preparation. The Tabellæ of Messrs. Allen & Hanburys comprise all the best known drugs and formulæ; and on inspecting them, we can readily understand the preference that patients have shown during the past few years for this convenient and accurate method of taking possibly nasty remedies. The principal quality in a ready-made pill is perfect and immediate solubility. This, Messrs. Allen & Hanburys claim for their gelatine-coated pills, several specimens of which we have summarily experimented with, and we are enabled to endorse the advantages they urge on behalf of gelatine as opposed to other less soluble envelopes. Their list of gelatine-coated pills is a long one, and comprises all the formulæ likely to be ordered.

The introduction of an ointment, a liniment and a soap, containing that fragrant and soothing antiseptic, Pumiline, will doubtless be welcomed by those who have had reason to be satisfied with the therapeutical effects, in bronchial and rheumatic affections, of Pumiline Essence. We have received samples of these preparations from Messrs. G. & G. Stern, 62, Gray's Inn Road, W.C., and can testify to their excellence, pharmaceutically considered. Their curative properties are, of course, less easy to establish; but knowing what we do of Pumiline itself, we cannot doubt that, incorporated in a carefully neutralised, super-fatted soap mass, it must be a valuable toilet requisite, and a desirable adjunct to the treatment of disorders of the skin, in which the use of ordinary soaps is contra-indicated. Pumiline Ointment is a skilfully prepared combination of lanoline, pumiline, and obate of bismuth, which commends itself as an elegant application for blemishes and excoriations of the skin; and it is also well adapted to replace cold cream for cosmetic purposes, seeing that the preservation of a pure complexion is at least as great an object as to enhance it when present. Pumiline Liniment is reputed to be very popular with athletes and others, who value it on account of the promptness with which it removes the pain of bruises, and restores mobility and ease to the stiffened or rheumatic joint. Pumiline Extract is used for preparing "Pine Baths," which, on account of their stimulating effect on the skin, are largely used in various diathetic and cutaneous affections. In the treatment of chronic affections of the bronchi and lungs, in the various manifestations of the rheumatic and gouty diatheses, these baths are deservedly popular.

London Hospital.—A contract has been entered into for the construction of an extension to the building of this hospital, at a cost of £15,951.

Hygienic Underclothing.

We have had an opportunity of examining the "Net of Health" Sanitary Underclothing, manufactured by Messrs. Struthers & Co. of 83, Finsbury Pavement, E.C. It is made on the now generally recognized principle that an open mesh is warmer, more comfortable and more conducive to the healthy functional activity of the skin. This underclothing is singularly elastic and comfortable to wear, and never feels damp even after the most profuse perspiration, and is equally well suited for all seasons and climates. It is made of cotton, pure wool, and silk, and comprises vests and pants for both sexes, "combinations," pyjamas, etc. An experience of some years enables us to testify confidently to their durability and to the comfort attending their use. A minor, but not unimportant, point is that they do not shrink on being washed.

Dietetic Preparations.

"FRAME FOOD."

A company has been formed under the title of "Frame Food Preparations," for utilising the bran of wheat, which, as our readers know, contains the phosphates and other bone forming principles of wheat. By treating the bran in the manner adopted by the "Frame Food" Company, a fine granulated powder is obtained, rich in phosphates, and a considerable amount of dextrine and albumenoids with but little starch. It appears well adapted for mixing with starchy foods, and a certain quantity, mixed with wheaten flour for bread, biscuits or pastry, renders them more nutritious, and necessarily adds to them the mineral and other principles usually wasted. It is sold in a variety of forms, as an extract for using in the way just described; as a porridge, formed of a cooked wheaten powder, in which the extract is added as an infant's food, somewhat similarly constituted; and it is also mixed with a prepared cocoa, rendering it more nutritious. Another form in which it is prepared is a jelly or jam, the flavour of which is similar to that of prunes or French plums. A non-alchoholic fruit drink is not the least interesting form in which Frame Food is offered to the public A small quantity of this syrup to a tumbler of water makes a delicious and nutritious drink for persons at all ages. The attempt on the part of this company to make such excellent use of what has hitherto been altogether a waste product is to be highly commended. The analysis of the extract gives ash 10·69, phosphoric acid 3·68, potash 4·24, aluminoid 21·4, sugar dextrine and starch 47·9 per cent. We consider it a food adjunct of great dietetic value, and very interesting from a scientific point of view. We are informed that Frame Food may be obtained from any chemist or grocer, or from the Company, Lombard Road, Battersea, S.W.

MACLEAN'S REVALENTA FOOD.

A SAMPLE of this food, manufactured by Messrs. Maclean & Sons, Edinburgh, has been placed in our hands for examination and test. It is based upon the Indian dahl or lentil. In nitrogenous constituents it is much richer than many other foods, for instance, white bread contains only about 8 per cent.; beef extract about 4; fresh beef 18 to 19; while this food has more than 20 per cent. of albuminous matter in its composition. It is very palatable to the taste, and, prepared according to the directions, may be used with advantage for infants after a certain age requiring artificial foods and for invalids. The athlete in training will also find this food a valuable aid. Dr. Stephenson MacAdam, an authority for whom we have the greatest respect, reports most favourably of the preparation, and we believe it will be found a valuable addition to our cereal foods. It has a further advantage of being economic, as it can be purchased in ½lb. tins at 6d.

"ORIGINAL" PLYMOUTH GIN.

THROUGH a somewhat interesting circumstance, our attention has been recently called to the "Original" Plymouth Gin, made by Messrs. Coates & Co., of the Blackfriars Distillery, Plymouth. As this number of the MEDICAL RECORDER will circulate largely amongst the profession in India, we have no hesitation in calling attention to its value for medicinal, as well as general use, in a hot climate like the one in question. In cases where a medical man considers it necessary to prescribe gin in preference to other spirits, we believe the "Original" Plymouth Gin will be found superior to all others. We say "Original" Plymouth Gin, for the reason that the proprietors have secured a perpetual injunction in Chancery to use that word, to secure them against imitators, for there is no doubt their product contains desirable features, absent in others, there is no doubt that from the presence of these attributes, it has secured the great demand that exists for it in most parts of the world, and especially in hot climates. On a recent visit to South America, we found gin and ginger ale, seltzer, and soda in great request, and from our own experience while there, we consider it one of the safest and most wholesome beverages to drink, where alcohol is considered necessary. If the Plymouth Gin of which we speak were in all cases used instead of some of the others we tasted, it would be to the benefit of those indulging in it. We do not think the profession at home appreciates this beverage to its full extent, and we advise those unacquainted with it to write to Messrs. Coates and Co. for a sample. An eminent London M.D. (whose name we suppress at his wish, but shall be happy to give it to any medical man who feels interested in it) has made, to use his own words, a most careful chemical and physiological test of the spirit, says: "It is perfectly free from fusel oil, and any of the empyreumatic substances, that *not rarely* impair the flavour and diminish the dietetic value of certain kinds of new or so-called raw spirits." Its strength is 38 per cent. of absolute alcohol (corrected, 79·15 per cent. of proof spirit, or what in common technical language would be expressed by 20·9, say about 20 under proof). When mixed with about an equal quantity of water, it produces a beverage similar in strength to that of many Spanish and Portuguese wines. The same authority also says that the flavour reminds (apart from that of Geneva) of fine Maraschino, but it excels many of the articles sold under these names in this, that it is *perfectly free from copper.* Also that *the purity of this gin is so absolute that it retains its specific gravity after distillation and reduction to its previous bulk*, and leaves no extractive, particularly no saccharine matter in the residue, and that if equalled, it is not surpassed by any other alcoholic beverage consumed in this country.

New Preparations.

WE have had by us for some time a sample of Dr. Norman's Hypophosphites in Syrup, prepared only by Alexander & Son, 114, Fore Street, London, E.C. The distinctive feature of this preparation of hypophosphites is an absence of the alkaloids. In cases where, for any reason, it is not considered desirable to exhibit strychnine or quinine, this product would seem to commend itself. For children it should prove a special advantage. The sample we have has kept remarkably well without any precautions, and is a distinctly palatable preparation. We are here only concerned with the pharmaceutical aspect of the question, and in this respect we can testify to its merits.

THE PRODUCTS OF PETROLEUM.

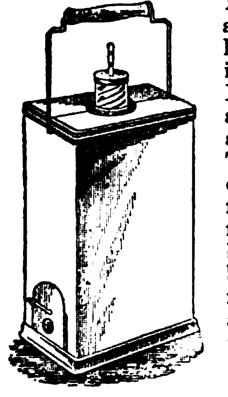
IN the February number of the *London Medical Recorder*, a correspondent alludes to the products obtained from petroleum, and especially to the vaselines, both for medicinal and toilet purposes. Following up those remarks we have pleasure in calling attention of the preparations introduced by The Dee Oil Company Limited. Hitherto the best vaselines have emanated from America, but the company in question have succeeded in perfecting such superior articles that a short description of them must prove interesting. The "Salvo Petrolia" of this company is an absolutely pure emollient, for external or internal use, manufactured by a new process, and is not brought into contact with acids at any stage of its manipulation, it is odourless and tasteless, and it complies with all the requirements the English pharmacopœia insists upon for such a product. Mr. Watson Smith, F.C.S., F.S.C., Lecturer in Chemical Technology, in the Owen's College, Manchester, recently carried out some very exhaustive experiments with "Salvo Petrolia," and a very popular American vaseline. The report of these tests which is of an interesting nature show that in all essential points, including consistency, viscosity, melting point, specific gravity and flashing point, the preparation of The Dee Oil Company is a superior production. Another point in its favor is that it never assumes anything approaching to hardness in the coldest weather, neither in the hottest weather does it ever run. Mr. Smith considers that it is only surpassed by the "Exceedingly beautiful pure white vaseline," prepared by the same company principally for therapeutic purposes. From personal use the writer is fully prepared to endorse the views of Mr. Watson Smith as to the value of white vaseline as an emollient in the treatment of throat disorders. Another product of The Dee Company from petroleum is a heavy hydrocarbon oil to which Dr. Roberts, of Chester, has given the name of "Oleum Deelinæ." This oil has proved a most valuable agent in the treatment of most skin diseases, and in a recent number of the *Lancet*, Mr. T. F. Raven, L.R.C.P., reports a case of eczema of some years duration, and apparently of a very stubborn character that was practically cured in six weeks, and Dr. W. Allan Jamieson, F.R.C.P.E.D., whom our readers will remember as an authority on skin diseases, says in his remarks on psoriasis: "Vaseline answers very well, but still better is a heavy hydro-carbon oil called Oleum Deelinæ, made by The Dee Oil Co."

LISTERINE.

LISTERINE is an antiseptic and deodorizing preparation which has for many years been a favourite with American surgeons. Its qualities are due to the essential antiseptic constituents of thyme, encalyptus, baptisie, gaultheria and menthe arvensis, in combination with which is associated a stated quantity of benzo-boracic acid. Experience points to its reliability in obtaining that condition of asepsis which is the ideal of every surgeon, and it has the distinct advantage of being fragrant and non-poisonous. Its antiseptic and anti-fermentative properties are not confined to lesions of the surface structures, and it is largely used for internal medication, in doses of a teaspoonful, in suitable cases. It does not coagulate serous albumen and it is thus free from the drawback, which so markedly limits the action of such agents as corrosive sublimate, most of which are moreover, extremely poisonous. Listerine, then, is an agreeable and powerful antiseptic and deodorizer, well adapted for ordinary surgical work, available for internal administration and useful for gargles, mouth washes and lotions, for which purpose it may be employed without hesitation seeing that no mishap can occur even in unskilled hands.

New Inventions.

THE LACTOTHERME.



THE LACTOTHERME is a simple and ingenious arrangement for heating infant's food and keeping it at a proper temperature. It is very compact and is well adapted for the use of travellers as well as for domestic purposes. The heat is obtained by means of carbon blocks, which will burn for eight or nine hours. If preferred, however, colza oil may be employed instead, and will burn even longer. A thermometer is supplied with the apparatus, by means of which the temperature may at any time be ascertained. We can imagine no more convenien contrivance in the nursery and in the railway carriage for invalids and infants. If the directions, which accompany each apparatus, are followed, no difficulty of any kind will be experienced, and no smell is evolved during the process.

AN AUTOMATIC SPRAY PRODUCER.

WE were recently afforded an opportunity of inspecting the "Periodic Automatic Spray Diffuser," manufactured by Messrs. Coxeter & Son. This is a very ingenious contrivance for maintaining the air of the sick room or ward, duly charged with volatile, antiseptic, or deodorising vapours. The motive force is obtained by the gradual escape of nitrous, oxide, or other liquefied gas into a bellows which, at stated periods, the interval between which is regulated by means of an index-screw, frees a spring and liberates a blast of the vapour-laden gas. It is claimed to work on uninterruptedly and without attention for weeks or even months. The machinery is of the simplest description, and we hope in an early number to be enabled to give a more detailed description of this very ingenious apparatus.

Patents.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37, *Chancery Lane, London, E.C.*]

1,810. An invention for the better and safety holding of teats, rings, or pads for soothers and comforters for babies. EDWARD DARIUS MINCHER, 1A, Helmsley Terrace, London Fields, Middlesex. Feb. 3.

1,852. An improved feeding bottle suspender. HARRY PROVIS, 17, Wood Street, Cardiff. Feb. 4.

1,903. Improvements in the method of treating nervous and other disorders of the human system, and apparatus therefor. WILLIAM PHILLIPS THOMPSON. 6, Lord Street, Liverpool. (THE ELECTROLIBRATION Co., United States.) Feb. 4.

2,148. An improved ear piece for accoustic instruments. STAFFORD LEWIS ARCHER, 53, Chancery Lane, London. Feb. 10.

2,235. Improvements in infants' feeding bottles. HENRY HARRIS LAKE, 45, Southampton Buildings, London. Feb. 11.

2,460. "Trovatolo," a medicinal compound. HERBERT JAMES SEDWAY, Monaville, Lausanne Road, Hornsey. Feb. 14.

2,571. Improvements in the manufacture of the material or composition known as "Dental Rubbers." CHARLES SAMUEL LEADBETTER, 4, St. Ann's Square, Manchester. Feb. 11.

2,615. An improved pad for the better application of corn solvents, lotions, ointments, and the like to human beings and animals. WILLIAM ALFRED HURST, 266, Albany Road, Camberwell. Feb. 18.

2,751. An improved inhaler, for use in case of bronchial affection generally. CHAS. JOHN CLARKE, 3, Poet's Corner, Westminster. Feb. 20.

3,247. An improved spoon or instrument for administering medicine or food to invalids or children. AMY KATE CORDES, 47, Lincoln's Inn Fields, London. Feb. 28.

3,300. Improvements in frames for optical glasses. RICHARD WELLS, 114, High Street, Kingsland. March 1.

SPECIFICATIONS PUBLISHED.

5,225. DORMER. Chlorine. 1889. 6d.
5,807. ARNOLD. Trusses, &c. 1889. 4d.
1,691. HOLDEN & BROOKE. Injectors. 1889. 1s. 1d.
4,558. COLLEY. Medicating, &c., paper. 1889. 4d.
9,699. MILNE. Surgical bandages. 1889. 4d.
9,700. MILNE. Surgical pads. 1889. 4d.
17,272. DE WALDE & REYCHLER. Chlorin, &c. 1889. 6d.

The above specifications may be had of Messrs. Rayner & Cassell, Patent Agents, 37, Chancery Lane, London, W.C., at the prices quoted.

[Should any of our readers desire to take out patents for inventions, either English or Foreign, and require advice upon the subject, the "Patent" Editor will be pleased to give them the benefit of his knowledge and experience. Communications addressed to the "Patent" Editor, London Medical Recorder, 13, Waterloo Place, Regent Street, S.W., will receive prompt attention.]

The London Medical Recorder.

Article 289.

THE MONTHLY MIRROR OF MEDICINE.

Dr. Ransome, in the Milroy lectures on "The Etiology and Prevention of Phthisis," makes the statement with which we believe most if not all physicians who know anything about chest diseases will agree to, viz., *that phthisis is a curable disease.* Clinical and *post-mortem* evidence corroborate this. He holds the bacillus to be *the cause* of phthisis, and believes that in most instances it comes from outside the body and enters by the air passages reaching the alveolus and then entering the epithelial cell, causes proliferation by irritation. The alveolus becomes stuffed with cells, the gradual irritation giving rise to the formation of giant cells. If the irritation be very great, caseation is rapidly produced either from overcrowded proliferation or, as according to Mr. Watson Cheyne, a chemical change in the cells brought about by the action of the bacillus. In some instances the irritative masses set up a hyperœmia with migration of white blood corpuscles, and thus the diseased focus becomes encapsuled and tries to keep off the bacillus from the system. The constitutional effects are not due to the bacillus but to toxic principles evolved during their growth and multiplication. After the lungs the pleurœ, bronchial and tracheal glands are first attacked, then the glands about the pharynx. The sputum which is coughed up may be swallowed, and while owing to the rapidity with which it passes down the æsophagus that canal is not affected nor is the stomach, owing to the gastric juice. Yet the bacilli which are contained within the sputum obtain entrance into the lymphatics of the intestines, the isolated agminated follicles being the most liable seat for tuberculous ulcers. Through the intestinal ulcers a path is opened to the mesenteric glands, the liver, and the whole of the rest of the body, and thus a general tuberculosis can be produced. Phthisis is found in all countries; the more densely is a place populated the higher is the death-rate from phthisis. Want of sufficient food, mental distress, hardships, exposure to the weather and cold are not, according to Dr. Ransome, of themselves an essential cause of phthisis. Occupation, large populations, exposure to changes of temperature, and bad ventilation are, however, causes of phthisis. Dr. Ransome found that within five or six years double or treble occurrences of the disease (phthisis) had taken place in the same houses, and Dr. Flick, of Philadelphia, from an elaborate topographic study of phthisis in that city comes to the conclusion that a house which has had one case of consumption will probably have another within a few years, and may have a large number in close succession. He ascribes this to the bacillus being on the walls of the houses. The bacillus requires a sojourn of one or two weeks in a suitable medium before it can take root. The epithelium is usually its first point of attack, or it may make its way into the inter-alveolar lymphatics. In the healthy body it is difficult for the bacillus to reach the ultimate air passages. Lung tuberculosis need not always depend upon inhalation but may arise from virus that has been swallowed or injected. It is highly probable that heredity has less to do with consumption than is commonly supposed; we must ascribe to it a much smaller influence than is usually given. It is to the previous affections of the lungs that we must look as the most common causes of bodily predisposition. There is, however, no necessary connection between ordinary diseases of the respiratory organs and phthisis. The tubercle bacillus may gain an entrance by the skin, generative organs, digestive tract and lungs. For prevention of phthisis marriage between phthisical people should be prevented, the home should be healthily situated, food good, phthisical mothers should not nurse, children should have plenty of ourdoor exercise, youths and men should not be employed too much in offices, great care must be taken during any acute disease, butcher's meat should be inspected, respirators worn by those working in dust, &c.; houses well built, ventilation good. As urine and fœces contain the bacillus they should be disinfected. All expectoration should be disinfected.

Passing on from the Milroy lectures which should be read by all who take an interest in phthisis we reflect Dr. Barr's lecture on the treatment of typhoid fever by prolonged immersions in water, Dr. Barr reports 9 out of the 12 cases which he has treated by placing and keeping them in a tank—one case we notice was kept in the tank for 13 days. Each tank is provided with a sheet of bed ticking which would allow the patient to be submerged. At the head is a strip a foot wide which does not sink so deeply, and in it rests an air pillow so as to keep the head above water. The patient is wrapped in a blanket and completely immersed excepting the head. The tank is covered with half a lid which prevents the weight of the bed clothing resting on the patient, a waterproof sheet and bed clothing to keep in the heat of the water. As long as the patient's temperature is over 100° the temperature of the tank need not rise above 90° to 93°, but as the body temperature approaches the normal so should the tank temperature. A fresh blanket is used each day, the urine and fœces are passed into the tank. The diet consists chiefly of milk, no alcohol is given and very little physic. When constipation was present calomel has been given. Passing on from this we would reflect Dr. West's paper, read before the Medical Society on Paroxysmal Hurry of the Heart which has been written upon by Dr. Bristowe in Brain under the title of "Recurrent Palpitation of extreme rapidity in persons otherwise apparently healthy." The patient is usually between 30 and 40, is suddenly seized with an attack in which the heart acts with very great rapidity, beating often 200 to 300 times in a minute. There may be no symptoms or pain, and palpitation may be present, no cause is assignable; worry and over-work may, however, produce it. The paroxysms vary from a few minutes to several hours, the tendency is for attacks to increase in frequency and for the interval to diminish; the interval may be months or years. There is no definite sign of cardiac disease but during the paroxysms the apex may be displaced, cardiac dulness increased and murmurs may be audible. Only one *post-mortem* has been made in which case the heart was found to be hypertrophied and dilated. Many cases recover, and many go on for years without a return of the attacks. Passing on we would briefly mention the paper of Sir Wm. Roberts on the history of uric acid in the urine, in which Sir William points out that uric acid is of no use in the elimination of nitrogen, that its existence was an anomaly. And that, although physiologically insignificant, uric acid was pathologically the most prominent component of the urine. The urine contains ingredients of which the salines and pigments of the urine prevented the precipitation of uric acid. Sir Alfred Garrod said sugar did not increase the output of uric acid. Sir William Roberts said diet did not appear to have much to do with the formation of uric acid. Dr. Claude Wilson of Tunbridge Wells, read before the Clinical Society a paper describing some cases of hereditary enlargement of the spleen, the description is we believe unique in the history of clinical medicine. Notes on six cases extending over three generations were read. It was difficult to decide whether the cases were to be looked upon as inherited malaria, as hereditary predisposition to miasmatic influences, or whether they were not really examples of some hitherto unrecognized morbid condition. Dr. Wilson suggested that these cases were really instances of tendency to perpetuation of variations in different organs. In a paper headed Trophopathy (tropos, food, pathos, disease) in the fatty and fibroid degeneration. Drs. E. and J. A. Cutler relate a series of cases of Bright's disease, in which the organism has been put into good working order and in some cases the disease cured, by rigid diet which consists of a rigid diet of beef from the top of the round, which is freed by the hand or a chopper from all fat and connective tissue; this pure, lean, muscular fibre is broiled and served to the patient on a hot-water plate. In some cases butter is not allowed. Attention must be paid to the skin. By giving the whole of the body a daily sponge both of ammonia and water and once a week a soap and water bath. Exercise by rubbing and massage must be resorted to, the underclothing must be changed night and morning, and the *morale* of the patient must be attended to. Hot water one hour before meals and on going to bed is recommended, the water should be boiled and then cooled down to a comfortable temperature. Dr. Sigmund Lustgarten writing in the *Times* and *Register* on the use of hot baths and hot springs in the treatment of syphilis, points out that the chief therepeutic benefit derived from the use of springs is the *hot bath* itself; for it produces a general and a local effect. In their general action they increase the excretion of urea, and further the process of decomposition and the elimination of chemical products amongst which are included the poisonous leukomaines. Locally hot baths accelerate the eliminations by removing the epidermis mechanically and by their action upon the blood vessels of the skin they stimulate the circulation. They also act as a stimulous upon the nervous system. Dr. Lustgarten considers that hot baths should take a very prominent part in the treatment of syphilis. Dr. Josias in his report to the Société Medicale des Hôpitaux on the treatment of typhoid fever by cold baths, states that he has treated 36 cases in this way, having the water at 18°C, and repeating the baths every 3 hours. Of the 36 cases, 35 recovered. Drs. Renoy and Richard, who followed this method, obtained 103 recoveries out of 108 cases. The treatment of typhoid by the cold bath is obligatory in the German army, and Dr. Longuet found that in 1865 out of 2500 typhoid patients between 500 and 700 died. From 1882 to 1884 the number of cases were nearly identical, but owing to the obligatory treatment of the cold bath having been introduced the number of deaths were only 221. From 24 per cent. in 1865, the mortality fell to 11 in 1876 and in 1883 it was not more than 9 per cent. Dr. Schimmelbusch, of Cologne, has recently made some experiments and believes that the staphylococcus aureus is the germ of boils.

ARTICLE 290.

MIRROR OF SURGERY.

It has been established beyond dispute that removal of the thyroid gland in man is prone to be followed by an anomalous form of degeneration, in which the patients exhibit symptoms almost identical with those of myxœdema or cretinism. This fact was pointed out by Hocker some years ago, and the resulting condition was named by him cachexia strumiksiva. With the object, however, of preventing this degeneration, several phrenologists and surgeons have thought that it ought to be possible to replace the diseased organ, after its extirpation, with a thyroid gland obtained from a healthy animal. The experiments of Horsley and of Von Eiselsberg have shewn that the animals upon which these grafts have been made do not succumb after a complete thyroidectomy. Further, Horsley has found that myxœdema has not followed thyroidectomy in the case of a man where a zosoplastic thyroidean graft was used. Upon this subject the *Union Medical* for March 15 has an interesting article. It states that Lannelongue conceived the idea of applying a graft of the thyroid body in cases of persons in whom the gland was congenitally absent, and who exhibited the signs of cretinism. A young girl of 14 years of age having come under his notice at the hospital fulfilling these conditions, it was decided to attempt the experiment. It was not possible to place the grafts in the normal situation of the gland owing to the large myxomatous swellings which had developed in the neck. The lateral and lower region, therefore, of the thorax was selected, below the left breast. A full-grown young adult sheep was taken for the experiment, and from it the left lobe of the thyroid was removed. The borrowed thyroid tissue was placed in a subcutaneous cavity in the patient. This cavity had been previously made by means of an incision through the skin, through which a bluish spatula had been passed and made to clear a space, the point aimed at being rather to tear the subcutaneous tissues than to divide them. Before the portion of thyroid tissue was placed in position its capsule was removed from it with success. The wound was subsequently united by several sutures. No rise of temperature ensued in consequence of the surgical procedure; the dressing was changed on the eighth day; the surtures were removed; union was complete without a trace of suppuration. The interest in the case now lies in the future history of the patient. What will become of the implanted thyroid tissue? Will it discharge the functions of a thyroid gland, and if it remains is it likely to increase in size, or will it be ultimately absorbed? These questions time alone will be able to answer.

The frequency with which modern surgeons are called upon to perform abdominal section for the relief of the various disorders for which the operation is indicated, naturally makes the subject of the after treatment of the cases, especially as regards drainage, one of large and commanding interest. A useful and practical, almost exhaustive, paper upon the subject of drainage in abdominal surgery appears in the journal of the American Medical Association for February 22nd of the current year. The author begins by stating that the question of abdominal drainage still stands in a most uncertain position, a condition of things which is owing to the dread felt by the surgeon that the tube will act as a source of septic infection and death. Reference is made to the practice of certain surgeons in regard to the use of a tube. Bantock and Tait are quoted as using the drainage tube freely, and with confidence, never allowing fear of evil consequences from the appliance to affect their decision about its use in any case. Olshausen is stated to discard the tube altogether, asserting that it is in no case necessary. Other practitioners occupy a medium position, in the sense that while dreading the tube they, nevertheless, sometimes feel obliged to use it, on account of dreading still more the absorption of undrained fluids in the cavity of the peritoneum. According to the author the latter class hold a most unsatisfactory and unscientific position, and probably have the largest mortality after their operations. Attention is drawn to the fact that if one surgeon, or class of surgeons, can use the abdominal drainage tube in a long series of cases, with a very small mortality, a mortality no greater than theirs occurs in other hands in a similar series of undrained cases, there is proof here that the drainage tube properly used is not a source of danger. Undoubtedly the great thing to be careful about in the use of the tube is frequent and efficient cleansing. The author observes that if statistics and practice of different operations are observed, it will be found that in most cases a large mortality and infrequent cleansing of the tube go together. He adduces some figures in support of the fact, and states that it is his practice to have the tube cleaned as often as every half hour, and observes that he has had so far 40 consecutive drainage cases with only one death. No fixed time can be set for cleaning the abdominal drainage tube. It should always be cleaned when it is filled with fluid; sometimes it is filled within fifteen minutes of the patient being returned to bed. By cleaning is meant the thorough emptying and drying of the tube, and the introduction of a fresh capillery drain if one is used. The main object of the tube is to favour the flow of all fluid from the abdominal cavity; it is therefore essential that the outward flow should be free. The dangers to be feared from accumulation of the fluid are those dependent upon septic changes which may produce local or general trouble. These changes are generally caused by septic matter introduced from without; but infection may also occur through the intestinal walls, especially if the intestinal coats are in a pathological condition from over distention or other cause. With regard to the absorbing powers of the penitoneal cavity, a rough calculation has been made, by which it would seem that from five to twelve pints of fluid in one hour can be thus disposed of. The author submits the following classification of cases which demand drainage:—1. Where the operation has been of long duration, and there has been much manipulation, leading to the belief that excessive secretion from the irritated membrane will ensue. 2. Where extensive raw surfaces or bleeding adhesions are left, or where bleeding from any other cause is to be feared. 3. Where there is existing peritonitis or ascites. 4. Where septic matter has escaped into the peritoneum, or where portions of tumour are left. 5. Where the disease is malignant and subsequent inspection is to be feared. Large quantities of fluid undoubtedly can be absorbed before septic inspection can take place, and, as a rule, drainage is much more frequently indicated in old than in young people. As a rule in all cases of doubt, however, the drainage tube should be used. As Tait also has pointed out, the tube is useful on other grounds than that of drainage. It serves as an important indicator to the surgeon in cases where excessive bleeding is to be feared; and by the injection of perchloride of iron through the tube, Tait was able to control three cases of hæmorrhage. The author next proceeds to discuss the question of the number of tubes which it is necessary to use in given cases. In removal operations upon the uterine appendages the single straight glass tube drains, not only the hollow of the vagina—the natural sink of the peritoneum—but also the whole field exposed in the operation. But in other cases, as in general prevalent peritonitis, it may be necessary to drain in addition to the hollow of the sacrum, the renal gutters, or other parts of the peritoneum. And if the tubes are used, not only for drainage but also for subsequent peritonial irrigation, the use of two or more tubes, placed wherever indicated, is of great value. In some cases it is desirable to use a tube combined with a capillary drain of gauze or wick, or even gauze or wick alone, placed in strips from the cavity or part to be drained to the abdominal wound. Capillary drainage is, in many instances, a most desirable method; possessing the advantages of promptness, thoroughness and complete exclusion of air; at the same time, giving entire rest to the patient and to the parts surrounding the drain, and permitting more movements of the body. The determination of the length of time during which the peritoneal cavity remains open to drainage is of importance in connection with the use of the abdominal drainage tube. Tait puts this limit down at seventy or eighty hours after the operation, after which irrigation of the peritonea cavity becomes impossible through the drainage tube on account of adhesion. The author is of opinion that the duration of general drainage depends to a great extent upon the nature and treatment of the case.

The sequelæ or accidents which are imputed to drainage, may be summed up as follows:—1. The formation of local peritoneal adhesions around the drainage tube, and the persistence of a fibrous band in the site of the tube tract, which may cause subsequent bladder trouble or intestinal strangulation. 2. The incarceration of omentum, or shreds from adhesions, through the perforations of the tube. 3. Prolonged suppuration from the drainage tube tract, or an incurable sinus. 4. Fæcal fistula from pressure of tube on intestine. 5. Ventral hernia resulting from imperfect approximation of fascia and muscles. The author then discusses *seriatim* the various details in connection with these several conditions, for the account of which we must refer our readers to the original article.

He subjoins the following conclusions to his remarks:—1. The abdominal drainage tube, properly used, does not increase the mortality after laparotomy. 2. Confidence in this fact is necessary for a correct determination of cases requiring drainage. 3. Frequent careful cleansing of the tube is of the greatest importance. 4. The few annoying sequelæ attending the use of the drainage tube can be avoided or easily cured. 5. It is safest to use the drainage tube too often rather than too rarely, just as we would in case of doubt use any other precautionary measure.

Article 291.

THE TREATMENT OF RHEUMATIC FEVER.

A more than usual interest attaches to the discussion which took place at the Royal Medical and Chirurgical Society a few weeks since on the treatment of rheumatic fever, for we have now had some fifteen years' experience of the employment of the salicylic series of drugs in this connection, and should be able, therefore, to draw some practical conclusions as to the advantages they possess over more antiquated methods of treating this affection. From time to time, since the adoption of salicylic acid and its compounds as anti-rheumatic remedies, there have appeared innumerable communications in the medical journals, advocating their universal employment for such purpose, and many able observers have given the most earnest attention to investigating the advantages and dangers attendant on their introduction into the physicians' arenamentarium. Frequenters of the several societies devoted to discussion of subjects of professional interest are familiar with the praises and objections sounded for and against the drugs in question; how, on the one hand, it is claimed that the painful suffering, the high temperature and the gravely dangerous symptoms associated with acute rheumatism all yield speedily and certainly under the administration of considerable doses, at frequent intervals, of salicine, or the salicylic acid compounds; and, on the other, it is urged that many and important injurious effects on the constitution of the patient are the price paid for whatever early amelioration of the acute symptoms is thus obtained. At one period of the controversy, the opponents of the indiscriminate use of the drug insisted on the increased frequency of endocardiac mischief among the patients treated on the salicylic system, as compared with the older method of alkaline treatment, and this point was mainly that on which the lengthy discussion at the Medical Society of London, several years ago, turned. Later, as further experience with the drug begot increased confidence in its therapeutic values, this first terror gave way to other dangers that have been supposed to attend its administration, and now we have quite a fresh ground for apprehension, afforded on the discovery, which Dr. Charteris says was made on July 4th, 1889, to the effect that artificially prepared salicylic acids all contain an impurity to which the toxic complications he and others have insisted on are due, and which do not occur as a result of using the natural form of the acid. The experiments whereby Dr. Charteris demonstrates the existence of the impurity in question are sufficiently conclusive to render doubt that it does exist no longer possible, and he has conferred a considerable obligation on his brethren by pointing this out, and by showing also how the objectionable qualities may be removed. None will deny that it is eminently desirable to have every drug included in the materia medica as pure as it can possibly be obtained; but on the other hand, if it can be shown that the possible evil effects of impurity have been much overrated, and need not really be held of any considerable account, then it becomes a consideration whether the increased cost of purifying such drugs ought to be allowed to interfere with their general employment in practice So far it seems to be agreed on all hands that the removal of the noxious element from the artificial salt will so largely raise the expense of its production that it cannot be expected to find so extended use in its purified form as it does at present. We therefore need to weigh carefully the evidence which accuses it of doing harm, as against the testimony which claims that it is not productive of any great amount of injury; and, as the case stands at present, it certainly does seem that a very much slighter degree of mischief is to be credited to the action of artificial salicylates and acid than is asserted by the alarmists who seek to curtail its employment, though it must not be overlooked that such skilled therapeutists as Drs. Maclagan and Charteris have thought it necessary to utter a warning against the drug, yet we cannot help but give attention also to such authorities as Sir Dyce Duckworth, Dr. Mitchell Bruce, and others who concur in the opinion that salicylates produce but minor evil effects in comparison with the great advantages to the patient from their employment.

At the meeting referred to above, Dr. Lauder Brunton made a valuable suggestion, and one which will probably carry comfort to the minds of all concerned. According to him, the German patent for the manufacture of salicylic acid has now expired, and henceforth it will probably be made in this country, under the guidance of those whose skill and resources will unquestionably soon supply us with a remedy free from the vice of impurity and capable of being used fearlessly and freely.

Article 292.

NEUMANN ON THE CLINICAL AND HISTOLOGICAL MORBID CHANGES OF THE VAGINAL MUCOUS MEMBRANE.*

Professor Isidor Neumann begins an elaborate paper on this subject by describing the venereal lesions of the vagina and cervix uteri. *Venereal ulcers* (soft chancres) are extremely rare in the vagina. They occur, for the most part, at the vaginal entry, extending from the carunculæ, but are less rare on the cervix uteri and vault of the vagina. The diagnosis in these latter situations is not always easy, and often can only be made with certainty by the results of inoculation on the skin. The reason of the great rarity of these ulcers on the vaginal wall is that it is protected by thick layers of pavement epithelium, while the vault of the vagina and cervix uteri are only covered with a thin layer of epithelium. The same remark applies to syphilitic primary sores which, when found at all in this region, are usually situated about the vaginal entry, and only by extension in the vagina itself. Such sores are always superficially ulcerated and have raised edges. Elsewhere in the vagina indurated sores are extremely rare. The author has only seen two examples in the middle third of that canal, while on the cervix uteri they occur pretty frequently, though not so frequently as is commonly supposed. *Broad condylomata* on the cervix and vaginal roof are more common than primary sores. They may be single or multiple, and appear as moderately raised lenticular papules, covered with a yellowish adherent exudation. *Pointed condylomata* (warts) grow most frequently from the prominences of the rugæ rather than from the bottom of the folds. They originate almost always in a large increase of the papillæ, and from grains the size of a millet seed may become by degrees prominences resembling the comb of a cock. Warts are never found in old age because of the senile shrinking of the papillary layer which then takes place. *Gummy affections* of the vagina occur most frequently in the lower third and about the vaginal orifice, never alone, but mostly in connection with gummata of the vestibule, labia majora, posterior commissure or rectum. Vaginal gummata originate in the submucous connective tissue, and when they break down externally, give rise to ulcers with undermined edges, thus differing from the ulcers produced by cutaneous gummata, which usually have a contour of a simple or ordinary kind. The vaginal mucous membrane becomes rigid, smooth and brittle, and thus, if the rectum be similarly affected, a recto-vaginal fistula may easily be caused by an examination, especially if any force be used.

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* *Archiv für Derm. und Syph.*, No. 5, 1889.

The author then proceeds to describe the different forms of vaginitis, of which he recognises nine, namely :—(1) Colpitis acuta diffusa; (2) Colpitis acuta granulosa; (3) Colpitis chronica diffusa; (4) Colpitis chronica granulosa; (5) Colpitis a graviditate; (6) Colpitis atrophica; (7) Colpitis senilis; (8) Colpitis aphthosa; (9) Colpitis miliaris. In acute diffused vaginitis the mucous membrane is dark red, swollen, inclined to bleed, and studded with puncta, producing a velvety appearance. This form of vaginitis is always accompanied by a copious discharge. As regards the anatomical changes, the epithelial layer is, according to the grade of inflammation present, sometimes thicker, sometimes, with the increased proliferation in the cutis, narrower and rarefied; in the latter case it projects, especially in the situations where the papillæ are swollen and enlarged. In other parts, again, the epithelium is depressed, according to the depth of the rugæ. Round cells, also, which in this as in all other forms of inflammation, accumulate along the walls of the vessels, are found in the vascular plexus beneath the rete, and in certain places the proliferations are so closely crowded together that they not only occupy the place of the normal tissue of the cutis, but press outward to such an extent as to take the place of the *rete Malpighii*, the consequence being that they, with the blood vessels, become so superficial that the slightest touch, the passing of a speculum, for example, causes bleeding at the places where these changes have taken place. The blood vessels themselves also are widened. Numerous sections of cavernous spaces are found in the upper layers of the cutis, and the involuntary muscular fibres of the surrounding vessels are invested by round cells. In acute gonorrhœa the histological changes are the same as those just mentioned, the products of inflammation, however, being more extensive, and filling even the whole tissue of the cutis. The diagnosis of the gonorrhœal form can only be made by the discovery of gonococci in the pus or epithelial cells; but the engorged and dilated vessels and the size of the cavernous spaces are especially noteworthy features in this more intense form of inflammation.

For a description of the non-venereal forms of vaginitis the paper itself, which is illustrated by numerous coloured plates, may be consulted.

ARTHUR COOPER.

ARTICLE 293.

SCANES SPICER ON NASAL OBSTRUCTION AS A FACTOR IN CARIES OF THE TEETH AND DEVELOPMENT OF THE VAULTED PALATE.*

THIS paper contributes a suggestion as to the relationship between nasal obstruction on the one hand, and caries of the teeth and malformation of the palate on the other. The constant association of these conditions attracted the notice of the author at an early period of special practice, and led to a theory of causation that may be summed up thus :—Nasal obstruction means mouth breathing, which, in turn, causes an abnormal exposure of the teeth, resulting in caries. At the same time, nasal irritation and physiological disuse lead to faulty evolution of the bony framework (vomer, etc.), with consequent malformation of the upper jaw.

At the outset the proposition is laid down that all normal breathing should be through the nose—an elaborate mechanism specially designed to warm, moisten and filter the air, and render it fit for contact with the lower respiratory tract. The higher animals, primitive races of mankind, and children at birth, breathe through the nose. In civilised man, however, nasal obstruction (with mouth breathing) is an extremely common condition. The usual forms are :—(*a*) *Temporary* (vascular and catarrhal), and (*b*) *Permanent* (hypertrophy, polypi, deformities and various outgrowths, bony, cartilaginous or adenoid). The general absence of these obstructions in uncivilised races is demonstrated by (1) study of skulls in museums; (2) examination of living native subjects (Negroes, Red Indians, etc.), who show wide patent nostrils, straight septums and absence of obstruction. In sharp contrast with these facts the author makes the striking statement that he has hardly ever met a civilised European without nasal obstruction of some kind. This constant occurrence in the latter Dr. Spicer attributes chiefly to environment, such as sudden and violent changes of temperature, from which savages and animals, being in the open air, are free.

Turning to the incidence of caries of the teeth and occurrence of the vaulted palate, Sir John Tomes and other authorities are quoted to show that these abnormalities are rare among savage as they are common in civilised races. Further, the direct agents in initiating caries are acids — principally malic, butyric and acetic — the product of fermentative changes. The conditions of the teeth during nose breathing are briefly, (1) uniformity of temperature; (2) they are bathed in warm alkaline saliva; (3) they are constantly scoured by the action of the lips, cheeks and tongue. In mouth breathing, however, these conditions, by which the factors of decomposition are kept in check, become entirely altered. The teeth are dry and cold; they are surrounded by acids and are no longer sluiced and scoured. A happy illustration is added by pointing out the tendency to caries in diseases like rheumatism and diabetes where saliva is scanty, or in fevers, after which teeth often rapidly decay. Some highly interesting observations are made with regard to the relative frequency of caries in the different teeth. It is remarked, for instance, that the molars are the most used and abused, and hence most liable to injury. Further, they are more irregular and pitted, and for that reason more calculated to lodge micro-organisms and *dèbris*. A practical summing-up of the signs of nasal obstruction, on which most reliance can be placed, is thus given :—"(1) Open mouth, dropped jaw and vacant expression of countenance in children; (2) dry mouth and parched throat during night and in morning; (3) clammy, sour taste in mouth on waking; (4) snoring and heavy breathing during sleep; (5) chronic sore throat and other uncomfortable sensations in pharynx; (6) thick, tenacious mucus clogging the naso-pharynx, pharynx and larynx before breakfast; (8) night terrors in children: (9) Ear-ache, deafness, and otorrhœa, from catarrhal processes, extending to the middle ear."

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* "On Nasal Obstruction and Mouth Breathing as factors in the Ætiology of Caries of the Teeth and in the Development of the Vaulted Palate."—SCANES SPICER, M.D., B.Sc. · "Odontological Society's Transactions." January, 1890.

Finally, the author recapitulates: — "Mouth breathing — the necessary consequence of nasal obstruction—appears to influence the production of caries of the teeth; (1) by increasing the stream of micro-organisms and of oxygen in the inspiratory air current; (2) by producing congested and inflammatory states of the buccal mucous membrane, with increased secretion of highly acid mucus; (3) by dessicating the secretions of the mouth, and so favouring their adherence, together with organic *débris*, to the pits and irregularities of the teeth; (4) by the alteration of the position of the lips, cheeks and tongue in relation to the teeth, so that the latter cease to be scoured with saliva by the incessant action of the former; (5) by the substitution of a cold air for the warm bath of saliva which floods the mouth when it is shut, and flushes away any matter that may have collected." II.—"The highly arched or vaulted palate, the contracted alveolar arch and certain irregularities of the teeth of the upper maxilla are very frequently associated with chronic nasal obstruction in young persons. This association admits of a rational explanation on the hypothesis that prolonged disuse of the nasal channels for their natural functions, during the growth of the organs, leads to stunted evolution of the nasal framework. The septum and sphenoidal sinuses partake in this, and fail to push down the palatine processes of the maxillæ, while the rest of the face, including the freely-used alveoli, continue to grow. The median line of the hard palate along the attachment of the vomer, tends to retain its infantile position. The weight of the lower jaw—which drops to allow of mouth breathing—acts through the tissues of the cheeks and presses on the superior maxillary alvoli, flattening each lateral curved half, so as to diminish the space available for the eruption of the canines and other teeth, which, therefore, are compelled to assume irregular positions."

The practical outcome of this theory, if proved, will be that caries of the teeth in cases of nasal obstruction is a symptom rather than a disease, and that the dental surgeon will have to call in the aid of the rhinologist for its successful treatment. At present, however, the subject is in an admittedly tentative stage. While fully recognising the value of these investigations it is important that the influence of other conditions, such as syphilis and scrofula, in the development and nutrition of both teeth and bone should not be lost sight of. Proper infantile feeding, again, is another great modifying factor. These possible fallacies are mentioned by Dr. Spicer, whose communication may be welcomed as throwing new light on the ætiology of hitherto obscure phenomena, and also as affording a valuable indication of the lines of future research.

DAVID WALSH.

ARTICLE 294.

UNNA ON SYPHILIS AND ECZEMA SEBORRHOICUM.

UNNA, in an excellent address on "Syphilis and Eczema Seborrhoicum," at his clinic for diseases of the skin at Hamburg, begins by paying a tribute of gratitude to the French School, and especially to Fournier, for the way the chapter on syphilides is worked out. The many sidedness of the syphilides, the polymorphism of this class of exanthems, which has been so rightly insisted upon, has been transformed under the hands of this investigator into a series of clinically recognisable fixed types. It appears almost presumptuous to attempt to add still other corner stones to this firm superstructure; it is only left for us, the posterity, to add the decorations.

My attention was first drawn to the occurrence of a mixed infection by having to establish a differential diagnosis between syphilis and seborrhoic eczema in certain doubtful cases of so-called corona veneris, and I was driven to the conclusion that the germs of both diseases were present, that the syphilitic eruption corresponded exactly in its distribution with the boundaries of a hyperaemic zone of a seborrhoic eczema, without at the same time losing the other characters of a lenticular syphilide in respect of its form, colour and course, and also that wherever secondary syphilis presented itself that it corresponded exactly in its distribution and even in the intensity of the inflammatory symptoms with the seborrhoic process.

Unna has distinguished three grades of the seborrhoic process: one slight and two more severe. *Squamous form*, In this, the inflammatory character, is the least pronounced. It forms always the commencement of seborrhoic eczema, and generally escapes notice. It appears either in one of the following forms: (1.) Circular, sharply defined, pale or reddened scaling spots and surfaces. (2.) Slightly raised, irregularly bordered, or yellowish red, scaly papules. (3.) Or of regularly formed serpiginous, yellowish red papular plaques and rings, with an eroded edge, and a yellow depressed centre.

From these varieties of the squamous kind, the intensity of the process is, by the inflammatory phenomena, increased in two directions.

On the one hand, the masses of scales increase with the catarrh, in which case we have the scabbed form before us (many cases of so-called psoriasis gyrata et annulata, and many dry eczemas); or, on the other hand, the process takes the direction of the ordinary watery catarrh, which gives origin to the *weeping* form of seborrhoic eczema. Both these higher grades of the seborrhoic process may appear in the same forms as the simple scaly condition, *i.e.*, circular, acutely defined patches of uniform intensity; or as an irregular net-like coalescing crop of lesions; or as sharply defined plaques or rings, which gradually extend in area.

The scabbed form is particularly associated with the ring-formed variety; whilst the oozing affects rather that variety which spreads in flat patches.

In whatever form the seborrhoic catarrh manifests itself, it is able to prepare the ground for the papular syphilide (which is the new growth special to the secondary stage) and to bring on the eruption. Having drawn attention that the production of a crusted syphilide, without any accompanying inflammation, is characteristic of its seborrhoic origin, and that in the crust of dry seborrhoic eczema fat takes the place of the serum of ordinary scabs; also, that Fournier divided papulo-crushed syphilides into those that underwent ulceration; and those that did not he proceeds to state that, in both cases, it is exactly the same product. The papulo crushed syphilide is a lenticular syphilide on the basis of a scabbing seborrhoic eczema, and for this reason the syphilide is covered with dry fatty scales.

This form of syphilide always occupies the favourite site of seborrhoic eczema, especially the hairy scalp and the face. It forms the greater part, if not the whole, of the cases of corona veneris. The yellow seborrhoic edge spreads chiefly on the temples and brow, and extends beyond the boundary of the papules. The inflammatory, yellowish red, flat seborrhoic papules are transformed, under the influence of syphilis, into larger, more raised, firm, flesh-coloured to copper-coloured darkly pigmented, specific papules or papular infiltrations of the raised circinate edge, which only betray their real origin by their thick, loose, yellowish-brown, easily removable crusts and the yellow tone of the surrounding parts. On the hairy scalp of the mons veneris and of the beard these crusted papules run together here and there, to form raised, tumour-like layers, which sink in at the centre and are surrounded by sharply cut, polycylic edges. It is in the naso-labial furrows, however, that this form treads most closely in the footsteps of seborrhœa. In that site the full yellow colour announces the presence of a seborrhoical affection, even in the absence of any scaly eruption. The seborrhœa, beginning in the eyebrows, and keeping close to the nose and mouth, descends in the middle line of the face down to the mental furrow. This area, which is at the same time the sweat channel of hyperhidrosis oleosa, is symmetrically divided by the nose and mouth. Well, exactly corresponding to this distribution, a row of hard, warty papules of the size of a pea stretch on both sides of the dorsum of the nose, round the mouth, and down to the chin. In no other spot do the syphilitic papules stand in such regular and characteristic order. It is not, however, the syphilis which determines this order, but the line of large coiled glands in the naso-labial fold which have become affected with seborrhœa and irritated by inflammation. So typical is the appearance of this mixture of pneumonia that it is easy to recognize at the first glance, not only that the patient in question is suffering from syphilis, but also that he is affected with seborrhœa. On the rest of the body, and especially on the lower legs. the papulo-crusted syphilide takes on chiefly the serpiginous form, circles, semicircles, segments of circles, and polycyclic gyri, with the centres healthy. These serpiginous forms have been taken as a proof that secondary papular syphilides can spread superficially, like many parasitic skin diseases. I am quite of the opposite opinion. The papular syphilide, which forms the foundation of the greater part of the syphilides of the secondary period, has *in itself* no tendency whatever to spread in a circinate manner. Large portions of skin become superficially involved from the continuous growth of fresh papules between the round or oval papules of older date. These can, of course, run together to form one continuous mass, but it is only the same process as takes place in variola confluens, in a severe purpura, or in any other infectious granulomatous disease which affects the skin acutely or subacutely through the vascular system.

Unna then proceeds to draw attention to what he considers the almost invariable rule, when there is an uninterrupted advance, uniform in all directions, viz., that there is invariably a morbid condition of the upper skin, or of the papillary body, for only these two layers are of uniform build in all parts of the skin surface; and, also, he states the fact that the cutis *gives* unequally in different places, that is, it shows various degrees of moteability, and of resistance in different directions, this latter being well exemplified by those morbid conditions of the cutis itself, and of its lymph vascular system, with respect to the anatomical construction of these parts, namely, erysipelas, lymphangitis, and phlegmon, it being left for the necrosing processes only to pursue a uniform serpiginous course. It is, therefore, easily to be appreciated that seborrhoic eczema, as it creeps onward in the upper skin, assumes a true serpiginous character, whilst the papular syphilide, when *occurring alone*, does not.

He then alludes to the papular syphilide being influenced by the more or less hyperæmic condition of the cutis, those portions of the skin being preferred which are brought into a state of hyperæmia. Similarly the hyperæmic influence of many skin diseases is sufficient to determine the localisation of a simultaneous spread of papular syphilides; for example, a miliaria rubra can bring about an outbreak of a small papular syphilide of the trunk; an accidental attack of scabies may cause a preference for the interdigital folds; and glutæal prominences as the place of predilection of the exanthem.

Unna then lays down the following law relative to a serpiginous syphilide of the secondary stage:—

A serpiginous parasitic disease of the upper skin is able to impress the eruption of a syphilitic exanthem with the stamp of a truly serpiginous lesion, in that it, by its continuous progression, keeps rendering new and hitherto healthy ring-shaped tracts of skin fit for the development of syphilides.

With a view of further explaining his belief that a serpiginous crusted syphilide is always a mixed infection, he alludes to the two forms of psoriatiform syphilis of the palm: (1) which, if of lesser intensity, comes out acutely in conjunction with other forms of papular syphilide soon after the beginning of the secondary period, this being not of necessity confined to the other part of palm, and synchronously with this there appears a crop of multiple red lentil-sized spots, which are isolated, and do not cause any great accumulation of scales. (2). Commences insidiously, and comes under treatment in the latter part of the secondary period, and is not merely a syphilitic lesion, but is a mixture of the obstinate seborrhoic eczema of the palm with a papular syphilide, as is shown by its slow development, its serpiginous extension, the bulky accumulation of scales, and the tendency to local relapses which oppose such resistance to treatment. It begins ordinarily in the centre of the volar, spreading continuously in one or several directions in a concentric manner, giving rise to such subjective troubles as tension, heat, pains, and attacks of itching; it produces hard accumulations of fatty, yellowish scales in the periphery; it leads to fissures, creeping forward on the fingers; finally, it resists purely constitutional treatment, demanding a careful local medicated application.

Unna next brings under notice the other varieties of seborrhoic catarrh in their relation to the papulo crusted syphilide.

Alopecia.—If patient is suffering from seborrhœa of scalp, when attacked with the syphilitic virus, there is the special prerogative of suffering from syphilitic alopecia, with slight scurfiness, and the appearance of small itching papules.

Dark red syphilitic plaques, surrounded by a fringe of ragged scurf skin, generally found on forehead, nose, and cheeks, are due to the uniting of a flat papular munnular syphilide, with a slight grade of seborrhoic rosacea.

Syphilis Vegetans is due to the combination of weeping seborrhoic eczema and syphilis.

Both the syphilides of the secondary period, as well as the seborrhoic eczema, are *κατ'ἐξοχήν* affections of the flex or surfaces of the head and of the qeintals.

In concluding this excellent address, the lecturer says we have a right to assume the an interlocking of the seborrhoic and syphilitic process:

I. Whenever the separate spots of the exanthem are of various sizes, confluent, and not sharply contoured.

II. Whenever the papules are wanting in the specific syphilitic colour, and look rather of a fresh yellowish red.

III. Wherever perfectly smooth papules are completely absent, but where, on the contrary, the greater portion of those present are covered with scales and fat scabs.

IV. Wherever the papules are found arranged in serpiginously progressive circles and rings.

V. Wherever the peculiar yellow colour of the seborrhoic process is present round about the papules, and especially in the centre of the serpiginous circles.

VI. Whenever the exanthem is accompanied by eczematous appearances, oozing, heat, and tension.

VII. Whenever it produces itching of greater or less intensity.

VIII. Whenever the syphilides occur on the confines between the forehead and hair, in the naso-labial furrow, on the sternum, between the shoulder blades, or in the sacral region.

IX. Whenever they are concentrated on the hairy regions or places in contact.

X. Whenever the exanthem exhibits an unusual obstinacy to constitutional treatment, whilst it at once improves or heals entirely under anti-seborrhoic treatment.

MORGAN DOCKRELL, M.A., M.D.

ARTICLE 295.

HAMMOND ON EXOPHTHALMIC GOITRE.

IN the *New York Medical Journal*, of January 25th, 1890, Dr. Hammond discusses the theories of exophthalmic goître, and relates three cases which were benefited by tincture of strophanthus and carbazotate of ammonium. This disease, Dr. Hammond remarks, has now been recognized as a distinct malady since 1835. Nevertheless, our knowledge of it has not much advanced. A few additional symptoms, such as Graefe's and Stellwag's signs, tremors and gastric disturbance, etc., have been added to those previously observed, and we possess a few remedies, which, though acting well in some cases are quite inefficacious in others. Quite recently Dr. Louise Bryson has described a symptom, hitherto unrecognised, which deserves considerable attention, from its important bearing on prognosis, and on the question of the localization of the seat of the disease. The symptom consists in the inability of the patient to expand the chest in forced inspiration up to the normal extent. Dr. Bryson states that when the expansion is reduced to half an inch or less the case is invariably fatal. In eight cases with which Dr. Hammond is acquainted, and in which this symptom was looked for, it was present, and in all, as recovery progressed, the power of expansion gradually returned.

Until the last few years a very universal belief was entertained that the disease depended upon certain lesions of the sympathetic. The evidence of *post mortem* examinations has disclosed in several cases diseases of the sympathetic, especially of the cervical ganglia, such as enlargement, hardness, granular degeneration, infiltration with round or spindle-shaped cells, and destruction of the ganglionic elements with connective tissue overgrowth. The goître and exophthalmos, as well as the enlargement and pulsation of the carotids, were attributed to paralysis of the vaso-motor nerves in the cervical sympathetic. The increased cardiac action was ascribed to irritation of the excito-motor nerves of the heart, which also run in the cervical sympathetic. In fact, whereas two of the cardinal symptoms were referred to paralysis of the sympathetic fibres, the third was set down to the exactly opposite condition, viz., irritation. This is an obvious difficulty in the sympathetic theory which has never been satisfactorily explained. But another difficulty is that a number of cases have been recorded in which no pathological change whatever could be discovered, *post mortem*, in the cervical sympathetic. Thus, Hammar (*Upsala Lakäre Forhände*, vol. xxiv.) cites one autopsy of his own and 22 others. In 15 no sympathetic lesion could be discovered. Hammond refers to 2 other autopsies (Roosevelt, *Med. Rec.* March 31, 1889 and Hale White, *Brit. Med. Journ.*, March 30, 1889) in neither of which was the sympathetic diseased. For these and many other reasons the theory of a central lesion, as the cause of the disease, has gained more and more acceptance. This theory was very ably sustained by Dr. W. A. Fitzgerald, who reviewed the whole subject in an admirable paper in the *Dublin Journal of Medical Sciences* of 1883. Professor Sattler was, perhaps, the first to clearly propound the central theory in an elaborate paper in *Graefe-Saemisch Handbuch*, bd. vi. 1880, and the theory received strong support from the experimental investigations of Professor W. Filehne (Zur Pathogenese der *Basedows'che Krankheit, Sitzungsbericht der Physic Med. Societat*, July, 1879). Filehne demonstrated that lesions of the medulla oblongata, in the region of the restiform bodies, gave rise to the symptoms of exophthalmic goître in animals. In one case he succeeded in producing the three cardinal symptoms in the same animal. The central theory of the disease assumes a lesion of certain centres in the medulla oblongata, with impairment or abolition of the functions presided over by these centres, lesion of the vagus centre causing acceleration of the heart, and lesion of the vaso-moter centres for certain definite regions, causing exophthalmos and goître. Diminished chest expansion, Dr. Bryson's symptoms, would result from lesion of the respiratory nucleus situated in the same region.

Central lesions have been occasionally described in *post mortem* accounts of the disease. Thus, Lockhart Clark, in a case of Morell Mackenzie's (Trans. Clin. Soc. vol. 1, p. 9) found softening of the corpora guadrigemina and of the posterior part of the medulla oblongata. Geigel (*Würzburg Med. Wochenschrift*, vii. s. 70, 1866) found in one case obliteration of the central canal of the spinal cord with sclerosis of the nerve substance, especially posteriorly. Hale White (*Brit. Med. Journal*, March 30, 1889) found evidences of slight inflammation, and numerous minute hæmorrhages immediately under the posterior surfaces of the medulla. extending from the mesial line as far out as the restiform bodies. It is true that in many instances no lesion has been discovered. Filehne, however, pointed out that even if *post mortem* examinations gave negative results, this would not necessarily be fatal to the central theory, since the existence of functional affections of the nervous system, *i.e.*, those in which it is *as yet* impossible to find organic lesions, is admitted.

Much evidence, indeed, has been brought forward in recent years to show that exophthalmic goître may arise as a reflex neurosis. Hopmann, Hack, and B. Fränkel have reported cases of nasal disease associated with exophthalmic goître, in which the cure of the nasal disease resulted in cure of the exophthalmic goître. Semon (*Lancet* 1889, p. 789) reports a case in which he operated for mucuous polypi in the nose, and in which, a day or two after the operation, exophthalmos affecting the right eye suddenly appeared. Graefe's and Stellwag's signs were both present, but no thyroid enlargement, and no heart symptoms. Hammond thinks that in cases of exophthalmic goître irritation in other parts should be searched fer and relieved, as possibly causing the disease in a reflex manner. Such sources of irritation are most likely to be found in the eye, the nasal cavity, and the genito-urinary apparatus.

Hammond records three cases which he recently treated by the administration of carbazotate of ammonium and tincture of strophanthus. He states that he is indebted for a knowledge of the value of the former drug to his clinical assistant, Dr. H. Combes, who discovered its efficacy through accident. He gives it in the form of a pill, in doses of one grain three times a day for a week, of two grains three times a day for a second week, and afterwards, if it can be borne, of three grains three times a day for a third week. It is rarely possible to take it longer than three weeks owing to its physiological effects. These consist in a darkening of the skin, an emanation of a peculiarly unpleasant odour, as of dirty feet, from the body, and, finally, severe gastric disturbances. When the administration of this drug was discontinued, he followed it with seven drop doses, three times a day, of tincture of strophanthus. In each case there was marked improvement in all the symptoms. JAMES B. BALL, M.D.

ARTICLE 296.

THE ÆTIOLOGY OF CONCOMITANT STRABISMUS. DRS. PROUFF, ABADIE, LANDOLT, MOTAIS, DIANOUX, DE WECKER, GALEZOWSKI, AND OTHERS.*

IF this discussion may be taken as representative, and from the above names we conclude that it may, opinion in the French School on the treatment of squint would seem to be less formed than among English ophthalmologists.

Dr. Prouff adopts the usual view of the cause of squint, attributing its permanence to hypertrophy of the internal recti from excessive innervation. He adds that a relatively high hypermetropia ought especially to act as a predisposing cause, "If excessive degrees,—6 or 8 D—seem to be exceptions to the rule, is it not because there is in these cases a slight degree of microputualmos, and therefore defective muscular development?"

Dr. Abadie apparently doubts whether binocular vision is ever obtained, in cases of strabismus, by orthoptic exercises or by the use of atropine. In all, or nearly all, the cases on which he has operated these methods of treatment have been tried in vain by other surgeons, often for a year or two. Binocular fixation, he seems to admit, may occassionally be obtained, and he believes that this has been all that has been obtained in cases in which it was supposed that binocular vision has been established. "In fact, in every squint which is at all marked (un peu accentué) the deviating eye is always more or less amblyopic." He then discusses the nature of the amblyopia, which he considers to be due to a defective development of the cerebral centre, which is absolutely incurable. He compares it to the inability to speak in deaf-mutes, which, he says, is also due to a non-development of the cerebral centres, and is incurable. (An unfortunate analogy, as it seems to us; for it is now well-known that deaf-mutes can be taught to speak, with a facility which is quite inconsistent with this view. It has never been asserted, as far as we are aware, by anyone that all cases of strabismus can be cured without operation, therefore the fact that Dr. Abadie has seen many cases that have been unsuccessfully treated, proves nothing; and the universal existence of amblyopia is not a fact that is in accord with the experience of most surgeons.)

Dr. Landolt, pointed out that atropine could not affect all squints, but only those which occurred in oung hypermetropes. In such its use was reasonable, and the results obtained were so good that we should not be justified in abandoning it. If cases are operated on which could be cured without operation, he believes that divergence is certain to result, sooner or later. Binocular vision, of course, only exists when there is fusion of the two retinal images, but this might occur even when there was a considerable degree of amblyopia in one eye.

M. Motais considers that the amblyopia may be congenital; but even if it be so, the cerebral centres atrophied from non-use may develop from use, hence the importance of curing the squint as soon as possible. He uses mydriatics to measure the ametropia; then gives fully-correcting glasses, and discontinues the mydriatic; but always employs orthoptic exercises. Capsular advancement he reserves for extreme cases.

M. Dianoux believes that in cases of congenital amybopia or of squint, if the antecedents be enquired into, there will generally be found a history of some hereditary fault, as a physical malformation, or nervous disorders.

M. de Wecker was of opinion that every child, however young, who has a permanent (constant?) squint during several months, should be operated on. He is in favour of his own operation of capsular advancement, by which a deviation of 50° or even 60° may be corrected.

M. Galezowski is convinced that all cases of convergent strabismus can be cured by correcting the hypermetropia, if only the treatment is commenced early enough. The question how long the glasses are to be worn is an important one. If these are discontinued too soon, the squint will often recur after they have been left off several months. He considers that the glasses should be worn for three or four years, in spite of the disappearance of the squint. (We are surprised that the plan is not suggested of first leaving off the glasses for distant vision, but using them for near vision) W. ADAMS FROST.

ARTICLE 297.

VON EISELSBERG ON PYLORECTOMY AND GASTRO-ENTEROSTOMY.*

DR. ANTON VON EISELSBERG reports on a second series of operations on the stomach, performed by Professor von Biltroth and his assistants from March, 1885, to October, 1889. This series of operations is made up of eighteen cases of pylorectomy, with eight recoveries; eleven cases of gastro-enterostomy, with five recoveries, and one case fatal in its results, in which both operations were performed. Reference is made to five other cases, all of cancer of the stomach, in which, after laparotomy had been performed, it was decided not to remove the disease, as in three of these instances the growth had formed extensive adhesions with the liver, pancreas and transverse colon, and in the remaining two, involved a considerable extent of the anterior and posterior walls of the stomach. In all these five cases the patients recovered from the effects of the exploratory operation. Of the eighteen cases of pylorectomy, ten were instances of the usual form of this operation, performed for malignant disease, of which ten cases six were fatal, and in the other eight, the like procedure was carried out for cicatricial stenosis of the pylorus, in four instances with good, and in four with fatal, results. The operation of gastro-enterostomy caused death in six of the eleven recorded cases, and in the other five instances led to considerable improvement in the condition of the patients. Nine of these patients suffered from carcinoma of the pylorus, one from cicatricial stenosis, and one from a growth of somewhat obscure nature. Of the eighteen subjects on whom pylorectomy was performed, seventeen were women, and of the eleven subjects of gastro-enterostomy, four were women and seven men. Operative interference for the removal or relief of malignant disease, it is stated was indicated in the presence of symptoms of sclerosis, and in the existence of a distinctly appreciable tumour, and also when typical and well-marked symptoms of stenosis were present without any signs of tumour. In cases in which a small tumour can be felt, whilst no symptoms of stenosis are yet complained of, Billroth would recommend exploratory laparotomy with an expectation of complete and radical removal of the disease in an early stage, and before it has had time to affect the lumen of the pylorus. In cases of large tumour, with or without symptoms of stenosis, and in which the patient is in a low state of health, no attempt should be made to excite the growth. Some few changes have been made by Billroth in the details of his operation since the publication of the first series of cases. Much importance is still attached to frequently repeated preliminary washing out of the stomach with warm water. The incision through the abdominal wall is now a longitudinal one, and is usually made in the middle line. On exposure of the seat of the disease, the surgeon should at once make sure of the presence or absence of adhesions of the new growth with the liver and pancreas, and also of swelling of the mesenteric glands. Close and extensive adhesions between the tumour and the pancreas are regarded as constituting a serious condition, as the breaking down of such adhesions is liable to be followed by free, and even fatal hemorrhage. The orifice in the stomach is kept closed during the operation either by an assistant's hand, or by Rydygier's clamp, whilst that on the duodenal side is closely encircled in a loop formed of six or eight strips of iodoform gauze. In order to prevent any discharge of cancerous juice into the peritoneal cavity, the opened lumen on each side of the growth is compressed by hæmostatic forceps. In cases of adhesions between the new growth, and the liver and pancreas, and in which the mesenteric glands have been invaded by disease, the surgeon should perform gastro-enterostomy in preference to the radical operation of resection of the tumour. In his recent cases of this operation, Professor Biltroth has adopted the method of von Hacker, and endeavoured to establish the gastro-duodenal fistula behind the transverse colon, an incision having been made through the meso-colon to allow of the stomach and duodenum being brought into contact. The most difficult detail in both operations is joining together, by sections, the thick wall of the stomach with the thin wall of the small intestine. For some hours after each operation nothing is given by the mouth, except in cases of extreme thirst, a few small pieces of pure ice. The patient is subsequently nourished by rectal injections of peptonised milk, given every three or four hours for ten days. A little cold milk with cognac is given by the mouth on the day after the operation, and on subsequent days, small and gradually increased quantities of fluid nourishment. In favourable cases, the patient is usually allowed to get up after the end of the third week. Of ten cases of malignant disease in which pylorectomy was performed, in three the growth was medullary carcinoma, in three others scirrhous carcinoma; in two glandular carcinoma, and in two colloid cancer. In seven of the eleven fatal cases of this operation, death was due to perforative peritonitis, in one case to commencing peritonitis to a very enfeebled and anæmic subject, in two to collapse, and in one to secondary hemorrhage. Dr. von Eiselsberg points out that death soon after resection of the pylorus is almost always the result of some fault in the performance of the operation, usually a failure to tie the sutures with sufficient tightness. Much attention should be paid both to the preparation and the fixing of the sutures, as the speedy dissolution or untying of a single stitch might place the life of the patient in great danger. Of the eight successful cases out of nineteen cases of pylorectomy collected in this second series, in four the operation had been performed for malignant disease, and in the other four for cicatricial stenoses. Of the four subjects of malignant disease who recovered from the effects of the operation, one died at the end of twelve months, and another at the end of eighteen months; the third was quite well six months after the operation, and the fourth died from chronic pyæmia five months after removal of the disease. The previously reported and the second series of cases of pylorectomy taken together show twenty-six instances in which the operation was performed for cancer, and eleven in which there was simple cicatricial stenosis. Of the subjects of malignant disease, eleven recovered from the operation, and of those of cicatricial stenosis, five. Of the former, however, all died after varying intervals, four within the first twelve months, one after an interval of two years and a half, and another after an interval of more than five years. Of the five subjects on whom the operation was successfully performed for the relief of cicatricial contraction of the pylorus, one lived for three months and a half, one for five years, and the remaining three were living at the time of the publication of this report. In eight of the nineteen cases of gastro-enterostomy published in this and a previous report, the patients recovered from the operation, and their condition, it is stated, was much improved. Much importance is attached to the results of gastro-enterostomy in these cases. The patients suffering from extreme debility, and affected with cancerous tumours that could not be removed, and thus threatened with speedy and painful death, were considerably relieved for a time, were able to take nourishment, and regained strength and comfort. With regard to resection of the pylorus, Dr. von Eiselsberg, whilst regarding this as one of the most difficult and dangerous operations in surgery, holds, that in favourable and well selected cases it may be fairly accepted as one likely to prove a life-saving procedure, since it has been proved, even in cases of malignant disease, that life may be thus prolonged for a considerable period—in one instance, for five years—during which period the patient may be free from relapse and capable of enjoying a comfortable existence.

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* *Bulletins de la Société Francaise*, 1889,

* *The Archiv. fur Klinische Chirurgie*, bd. 29, hft. 4.

Anatomy and Physiology.

RECENT PAPERS.

298. Schultze, Dr. E.—On the Influence of Diet on the Excretion of Nitrogenous Substances. (*Klugen. Arch. f. d. gen. Physiol.*, bd. 45.)

299. Fagerlund, Dr. L. W.—On the Development of Ossification Points in the Bones of Extremities during the First Year of Life. (*Finska Lakaresallskapets Handlingar*, Jan., 1890, p. 37.)

300. Cunningham, Prof. D. J.—On the Report of the Committee of Investigation in the Anatomical Department of Trinity College, Dublin, 1888-9. (*Trans. Roy Acad. of Med. in Ireland.*)

301. Löwit, Dr.—On the Pre-existence of Blood Plates and the number of White Blood Corpuscles in Normal Human Blood. (*Virchow's Archiv.* bd. 117, 1889, p. 5451. Extracted in *Central blt. f. Algemeine Pathology*, vol 1, No. 5, p. 173.)

302. Salowski, Dr. E.—On the Quantitative Estimation of Uric Acid. (*Centralb. f.d. Med. Wissensch.*, 1890, No. 5.)

303. Grismer, Dr.—On Safranin as a New Reagent for Sugar. (*Wiener Medizinsche Blätter*, 1889.)

Art. 298. *Schultze on the Influence of Diet on the Excretion of Nitrogenous Substances.*—From experiments on himself Schultze concludes that—1. In men as well as in dogs, the more the diet approaches the purely animal, the more nitrogen is converted into urea, in relation to the total nitrogen. 2. The proportion of uric acid to the total nitrogen diminishes with flesh diet compared with mixed diet in still greater degree with flesh diet with consumption of large quantities of alkaline waters and avoidance of alcohol and narcotics, although the absolute quantity of uric acid is increased. 3. The same holds good of the relation of uric acid to urea. 4. Most probably in fever, even without respiratory disturbances, not only are greater quantities of uric acid produced, but the proportion of uric acid to the total nitrogen as well as to the urea experiences a marked increase. 5. The importance of the consumption of large quantities of alkaline waters as well as the withdrawal of alcohol in the treatment of gout is not to be denied. Indeed, these seem to be of more importance than the prohibition of meat.

G. D'Arcy Adams, M.D.

299. *Fagerlund on the Development of Ossification Points in the Bones of Extremities during the First Year of Life.*—Dr. L. W. Fagerlund, of Hefsingfors, publishes a paper on the subject, based on his researches in Professor E. V. Hofmanns' forensic laboratory, in Vienna. The total number of infantile bodies amounted to 40 (25 boys, 15 girls, aged from 10 hours to 14 months). The ossification points were measured in the following situations:—caput humeris, eminentia capitata humeris, os capitatum, os hamatum, lower epiphysis of the femur, upper and lower epiphyses of the tibia, talus, calcaneus, cuboid bone. The main outcome of the author's work may be given thus:—1. The ossification point in the lower epiphysis of the femur is subject to exceedingly wide variations in its size, and hence cannot afford a criterion for determining the infant's age. 2. About the same is to be said in regard to the head of the humerus. True, its ossification point is invariably found already developed in infants of 11 or 12 weeks, but on the other side it may develop sometimes by far earlier (even during the last month of intrauterine life). 3. No criterion can be also supplied by the ossification points in the upper epiphysis of the tibia, or calcaneus, or cuboid bone. 4. The most reliable basis for determining the infant's age is afforded by the ossification points in the eminentia capitata of the humerus, os capitatum, os hamatum, and lower epiphysis of the tibia, which points never develop before the fourth month of extrauterine life, and by the head of the femur, in which the ossification point never appears before the second half of the first year of life. Valerius Idelson, M.D.

300.—*Cunningham on the Report of the Committee of Investigation in the Anatomical Department of Trinity College, Dublin*, 1888-9.—Professor Cunningham is to be congratulated on the results of the work of his committee. The following are the chief points on which notes are given:—(1) On an occasional eighth true rib in man (O. L. Robinson). The results of this investigation have already been published by Prof. Cunningham, and need not be further dwelt upon. (2) On cervical ribs (R. L. Heard). Although 50 subjects were examined, no example of this abnormality was discovered on either side. One case of reduction of the first rib, so as to look like a cervical rib was obtained. (3) On the achselbogen muscle (R. L. Heard). Eight of these muscles were examined. In three subjects the condition was bilateral. The muscles arose as follows:—(*a*) In three cases from the superficial surface of the tendon of the latissimus dorsi. (*b*) In three cases some fibres arose from the superficial surface of the latissimus dorsi, whilst others were directly continuous with those which formed the anterior border of that muscle. (*c*) In the remaining two cases, both of which occurred in the same subject, the muscle was directly continuous with the border of the latissimus dorsi; not the slightest indication of any demarcation could be detected. In both of these instances the anomalous muscle formed a complete muscular floor for the axilla. In those cases in which the nerve of supply was found, it came from the internal anterior thoracic. (4) On the musculus sternalis (R. R. Brunskill). Six examples of this muscle were examined; they were met with among sixty subjects, and in two cases were bilateral. In all the cases the nerve of supply was traced. It came from one or other of the anterior thoracic nerves, but in the majority of instances from the external anterior thoracic. In a female subject, in which the muscle was bilateral, a triple nerve-supply was found to the left sternalis, and a double to the right. On the left side, two of the nerves came from the external anterior thoracic, and one from the internal anterior thoracic; on the right side, the two nerves arose by a short, common trunk from the external anterior thoracic. Prof. Cunningham says that he is not aware that any case similar to this has been published before. Another interesting case was one in which a narrow band of fibres arose from the junction between the manubrium and gladiolus, and extended transversely outwards on the surface of the pectoralis major. It was inserted into the deep fascia covering the anterior fold of the axilla, and received its nerve of supply from the external anterior thoracic. "The interest of this anomaly is centred in the fact that it undoubtedly belongs to the sternalis group. In fact, I look upon it as a sternalis in which the rotation of the pectoral fibres which compose it has been arrested in its downward movement. It is to be regarded then as a valuable addition to our evidence in connection with the sternalis question."

Bertram C. A. Windle, M.A., M.D.

301. *Löwit on the Pre-existence of Blood Plates and the number of White Blood Corpuscles in Normal Human Blood.*—Laker stated that he had observed blood plates as constant formed elements in the blood vessels of the bat's wing. Löwit, on the contrary, has been able, by another method which he has employed, to demonstrate the absence of these blood plates in unchanged blood. He pricked his finger. having first placed upon it a mixture of castor and cod liver oil. The drop of blood which exuded was placed, with the oil enveloping it, upon a slide. It sank by degrees to the bottom, and spread itself out upon the lower surface, which had been smeared with vaseline to avoid the harmful influence of the glass, and at the edge of the drop it was possible to make a microscopic examination. Löwit was quite unable, under these circumstances, to find any blood plates, although they were always demonstrable as soon as the blood was subjected to any mechanical influences, as when a cover glass was laid upon the drop, or when the temperature of the oil mixture fell below 37° or 38° C. The author sees in these observations a new proof of his idea that the blood plates are not pre-formed blood elements, but that they originate by injury to the blood, which, however, need be only trifling, but which may be intravascular. He believes that the colourless corpuscles are the chief sources of the blood plates, as he has actually seen them break up into little plate-like structures. He allows their origin, however, from the plasma, by the breaking up of globules. Löwit further makes use of his preparations to observe the proportion of the globules in the blood. Since they form the blood plates by their breaking up, so long as the latter are absent they are more numerous than after awhile, and thus the more numerous the blood plates are in a preparation the scarcer are the white blood corpuscles. He concludes, therefore, that the white blood corpuscles are generally more numerous than one is led to believe from the experiments conducted in the ordinary way. [It is interesting to note that this observer agrees with the late Dr. Wooldridge in allowing that the so-called *blood plates* may arise from blood plasma free from corpuscles, although he believes the colourless corpuscles to be the most important sources of these much debated blood elements.—*Trans.*]

Vincent D. Harris, M.D.

302. *Salowski on the Quantitive Estimation of Uric Acid.*—The author shows that the volumetric method of Haykraft, Hermann, and Czapek, of estimating uric acid is based on the false assumption that the precipitate formed by silver solution in ammoniacal urine contains one atom of silver for each molecule of uric acid. In reality this precipitate has no constant composition, but in any case contains more silver than the above proportion. Usually there are four atoms of silver to three of uric acid. The above authors certainly obtained satisfactory estimates by their method, but this is because the silver precipitate in their experiments was insufficiently washed, and this retarded some chlorides. On dissolving the precipitate in HNO_3 some silver remained as chloride, and thus too little silver was found. The author describes results of fresh experiments by Forn and himself, fully confirming his statement some years ago.

E. J. Edwardes, M.D.

303. *Grismer on Safranin as a New Reagent for Sugar.*—The author recommends safranin as an admirable test for sugar. The following is the method of employing it:—Sixteen drops of urine are diluted with five times the volume of the safranin solution (1 to 1,000), and boiled with thirty drops of caustic potash solution. If the urine contains sugar, the solution is decolourized. The test possesses the advantage over Fehling's test in that it is not decolourized by uric acid, creatinin, chloral-chloroform, peroxide of hydrogen, or salts of hydroxglamin. On the other hand, the solution of safranin and urine is completely decolourized by albumen, but only after very prolonged contact.

Surgery.

RECENT PAPERS.

304 . **Guyon, Prof.**—On the Results of Operation for Tuberculosis of the Bladder. (*Annales des Malaaies des Organs Genito-urinares.*)

305. **Bull, W. T., M.D.**—On Treatment of Fracture of the Patella Without Operation. (*New York Medical Record*, March 22nd, 1890.)

306. **Boennecken, Dr.**—On the Results of Enucleation of Veins of the Lower Extremities. (*Berl. Klin. Wochenschr.*, No. 38.)

307. **Tait, Mr.**—On the Surgical Treatment of Typhlitis. (*Birmingham Med. Rev.*, Feb., 1890.)

308. **Verneuil, Prof.** — On Scrotal Pneumatoceles. (*Bull. Med.*, March 2, 1890.)

309. **Kummer, Dr. E.**—On Bilocular Hydrocele of the Spermatic Cord in a Boy of 3½ years of age. Excision, cure. (*Rev. Med. de la Suisse Rom.*, March 20, 1890.)

310. **Robson, Mr. Mayo.**—On Laparotomy in Pelvic Abscess. (*British Med. Journ.*, March 22, 1890.)

311. **Klophel, Dr. C. G. B.**—On the Prevention of Urethral Fever. (*Therap. Gazette*, March 1890.)

312. **Stamm, Dr.**—On a Small Solid Tumour in the Left Inguinal Region Caused by a Fish-bone. (*Journ. of Amer. Med. Assoc.*, Feb. 1890.)

Art. 304. *Guyon on the Results of Operation for Tuberculosis of the Bladder.*—At the French Congress of Surgery, 1889, Prof. Guyon gave his latest account of the results of his operations performed for tubercle of the bladder in four cases. His procedure had been to open the bladder above the pubes, to explore carefully, and to remove the tubercular patches in the mucous membrane by scraping and by the cautery. In one case out of the three the result appears to have been eminently successful, and it is now five years since the operation. The man has been able to resume his work as an artist, and to get married and have a child. He makes water about every two or three hours during the day, and is disturbed about three times in the night. The extent of the vertical disease is not again mentioned, but in the three fatal cases it was evidently too far advanced and affecting other organs to be removable, but the condition of the parts operated on was very satisfactory, and showed very little tendency to recurrence. In one case, however, where the disease was more deeply placed, the results were not so encouraging. He is inclined to look hopefully on the operation where the tuberculosis has not advanced too far. The extent of the disease cannot, however, be determined at all easily, and it is only by cystotomy that the condition of the mucous surface of the bladder can be seen, and then only to a limited extent. After his sanguine views about operations in these cases, he concludes his paper with the somewhat contradictory remark that medication was specially to be urged in cases of tubercle of the bladder, though operation is the possibility in all other cases of tubercular deposit.

W. W. Wagstaffe, M.D.

305. *Bull on Treatment of Fracture of the Patella.*—In a paper giving the results of his 15 years' experience at the New York Hospital, Dr. Bull speaks strongly in favour of the non-operative treatment of fracture of the patella. Wiring the fragments with its attendant risks of suppuration and anchylosis he condemns as needlessly endangering the life of the patient. Of Malgaigne's hooks, Volkmann's method modified by Kocher of subcutaneous suture wtih silver wire or silk (" peripatellar suture ") and aspiration or puncture of the joint to hasten approximation of the fragments, the author says, they are unnecessarily complicated and are all attended with risk. If they are adopted it must be in the face of evidence that ligamentous union will give a useful and strong link and that this can be accomplished by safe and simple measures. The treatment he adopts is the application of plaster-of-Paris bandages after the effusion has subsided, the fragments being steadied with strips of adhesive plaster. If the patient is seen immediately after the accident he uses the ice bag and cold water compresses to check effusion, but if not seen for several hours after, he relies on equable compression of the joint with cotton compresses and bandages, the limb being slightly elevated on pillows. As a rule the gypsum bandage can be applied on the fourth or fifth day after the accident although in some of his cases two weeks elapsed before the swelling diminished sufficiently to permit of close approximation of the fragments. In applying the gypsum bandage the limb is elevated and the upper fragment drawn down and held by a loop of plaster, the centre of which rests above it on a pad of lint or gauze, while the ends pass obliquely downward to the upper part of the calf and the posterior surface of the leg. The lower fragment is similarly supported. It is possible to tilt the fragments by this manœuvre and so separate their upper margins. Their position should be noted and the first turns of the muslin or flannel bandage, which protects the skin from the gypsum, should be passed circulary about the knee to counteract this tendency to tilt. After the tendency to effusion has subsided, there is no tendency to drawing up the fragments. The patient sits up after the gypsum splint is dry. If, through shrinking of the limb, the splint gets loose, it may be renewed. After six or eight weeks the plaster splint is removed, and its posterior half or a leather back splint worn by day for another month or six weeks, the patient being allowed to walk with the aid of crutches. During this time shampooing and kneading of the thigh and knee may be practised, care being taken not to flex the joint and thereby stretch the ligament. At the end of three months he has usually found patients able to bend the limb but slightly—say not quite to forty-five degrees from the straight position, but the power of extension has been good. Occasionally, in weak or nervous patients, the splint has been used for an additional month—making the period of enforced stiffness four months. From this time the daily use of the limb should be enjoined; a stick or cane being used as a safeguard against accidents and friction of the knee should be practiced at night, but passive motion is unadvisable as refracture may occur. When refracture takes place wiring the fragments may be necessary and the author advises wiring at first in cases of compound fracture.

George Brown, M.R.C.S.

306. *Boennecken on the Results of Enucleation of Veins of the Lower Extremities.*—At the Surgical Clinic at Rostock 14 cases of venous enucleation were treated between October, 1882, and May, 1889, and Boennecken states that by means of properly executed enucleation, the affections which were experienced before by the patients' fatigue, pain, cramp in calf of leg, as well as derangements of skin, eczema, ulcer, could be healed. Morgan Dockrell, M.A., M.D.

307. *Tait on the Surgical Treatment of Typhlitis.*—Mr. Lawson Tait contributes a very instructive article on the surgical treatment of typhlitis. A complete list is given of 24 cases in which the author employed surgical treatment. The earlier the case is treated by operation the better for the patient. Many practitioners assert that more than half these cases end by resolution, but Mr. Tait thinks this is only true of the individual attack; in many of his cases the patient had suffered from previous attacks, which had ended favourably without operative measures, but each succeeding attack seemed to get worse than the last, from which they would have been saved had an incision been made in the first instance. Mr. Tait at one time used to remove the vermiform appendix when it was the source of the suppuration, but now he prefers to simply open the appendix and to drain it independently. The author lays down the rule that as soon as the diagnosis of typhlitis is established no attempt should be made by delay to ascertain the particular variety of the disorder, but a surgical operation in search of pus should be insisted upon at once. Even if no pus be found, great relief is often gained by simply relieving the tension, and there is never any after trouble from the incision if proper care be taken to have a healthy healing wound.

308. *Verneuil on Scrotal Pneumatoceles.* — The rare conditions in which the scrotum becomes the seat of a diffuse or circumscribed tumefaction, due to gaseous distension, comprises several distinct varieties, according to the situation of the gas, the nature and source of the latter, and the effect on the tissues and on the organism as a whole. (*a*) The gas may collect either in the connective tissue or in the cavity of the tunica vaginalis. In the first case, it constitutes a subcutaneous pneumatocele; in the second, a vaginal or serous pneumatocele. Both varieties may exist at the same time. (*b*) The nature of the gas may be widely different. It may contain oxygen, nitrogen, and carbonic acid in variable proportions; or the gas may resemble that of intestinal origin. The first of these entails no particular danger, and is benign, but it is quite otherwise when the effused gas is heavily charged with impurities. The effect of the latter is to provoke inflammation, with a tendency to suppura-

tion and gangrene. Scrotal pneumatoceles are never idiopathic, and are invariably preceded by lesions in the scrotum itself, or in some region more or less removed. There may be a wound allowing of the entrance of air, such as puncture with a trochet, while pneumatocele due to distant lesions may be due, in order of frequency, to:—(1) Wounds involving the respiratory passages; (2) wounds involving the intestines; and (3) abscesses, whether fœcal or urinary, situated in proximity to the genital apparatus. The treatment is purely symptomatic. In the so-called aërial pneumatocele, the most that is recognized is simple puncture and compression; but in the more serious forms, free incision, scrotal resection and even castration mey become necessary.

309. *Kummer on a case of Bilocular Hydiocele of the Spermatic Cord in a Boy of 3½ years of age.—Excision, Cure.*—The author supplies the following notes of this case, in which, after operative treatment, a successful result was obtained. In the spring of 1889, the parents of the patient noticed that the scrotum was larger on the right than on the left side. The enlargement continued to increase, and the author was consulted in August of the same year. He then found that the right side of the scrotum was of the shape of a small pear; the testicle, normal to the feel, could be completely separated from the tumour; the surface of the latter was smooth; the swelling also was, from elastic consistence, transparent, non-reducible into the abdominal cavity. On the 13th August, chloroform having been administered, an oblique incision was made, and after having incised the tunica vaginalis, which was much thickened, the hydrocele was exposed, and it was possible to separate the cyst from the spermatic cord and the testicle without destroying it. The length of the cyst was 35 centimtres; it weight was about 8 grammes; it contained some slightly reddish fluid of neutral reaction. On boiling this liquid it evagulated *en masse*, and examined under the microscope, some red blood corpuscles were seen, and a reddish amorphous pigment, but no white blood cells. The internal aspect of the cyst was very vascular, and shewed many ecchymoses; and at several places deposits of fibrine were noticeable. The cyst itself consisted of two pouches, which communicated by a very narrow opening. In the lower pouch was found a whitish substance of the size of a large pea; this, on microscopical examination, was demonstrated to consist of fibrine. The operation having been completed, the sides of the incision were united by four deep sutures, and the surface of the wound was painted over with iodoform collodion. No dressing was used. The sutures were removed on the fifth day; union took place by first intention. The author, in some added remarks, points out that excision of the cysts in these cases is the best treatment, and much to be preferred to puncture with or without injection. The deep sutures do away with the necessity of a drain, and the use of collodion dispenses with the application of any dressing.

310. *Robson on Laparotomy in Pelvic Abscess.*—The author read a paper on this subject on March 11th last before the British Gynæcol Soc. He defined pelvic abscesses as having nothing to do with the ordinary forms of abdominal abscess, but as being secondary to some condition, the essential feature of which was the presence of pus dependent on inflammation in or near the uterus. After reviewing the measures generally employed for the relief of this condition, and pointing out that the indiscriminate use of the aspirator was not unattended with danger, he read brief notes of six cases of pelvic abscess in which he had performed abdominal section; all were successful. One of the cases was a tubercular abscess. He urged that, no matter how foul the contents of the abscess, there need be no apprehension of the result of pus, etc., escaping into the peritoneum if proper precautions were taken by careful cleansing. Once the presence of pus within the pelvis had been diagnosed, it should be evacuated, the vaginal method being elected only when fluctuation could be clearly made out from that situation.

311. *Klophel on the Prevention of Urethral Fever.*—The author lays stress upon the following points:—1. In operations for the relief and cure of chronic retention of urine, the complete evacuation of the urine at first should not be permitted, but rather the withdrawal of only a few ounces, and the immediate injection of a solution of boric acid or other mild antiseptic, in volume equal to one-half the quantity of urine withdrawn, lessening with each succeeding injection the quantity of fluid thrown in, and increasing the amount of urine withdrawn. As a result, we have less shock, if, indeed, any; no suppression of urine; no hæmorrhage from the urinary organs; and slight, if any, so-called urine fever. 2. Tight strictures of the membranous urethra are more successfully, and hence more safely, dealt with by perineal section. When associated with strictures of the pendulous urethra, the combination of internal and external urethrotomy is undoubtedly the best treatment. 3. The decomposition of blood, urine, and other organic matter in the bladder or urethra, may give rise to the the phenomena of urethral fever through the production of ptomaines; hence the necessity for antiseptic treatment, generally and locally. 4. The disease is more common among those who are predisposed to it by a peculiar nervous temperament. 5. In view of the fact that more or less shock attends all urethral operations, especially the forcible and rapid dilatation of old strictures with sounds; and as sudden death has followed even the gentle insertion of a sound, the calibre of which was less than that of the stricture, it is hence important that all practicable antiseptic precautions should be observed in every case of dilatation of a urethral stricture or strictures, with a view to avoiding, so far as possible, such effects, which are more likely to follow the rapid dilatation of old strictures when not preceded by internal urethrotomy. 6. It is also important to ascertain the condition of the bladder, urine, and kidneys before operating for stricture of any degree, and when these two organs are found extensively diseased, the greatest skill, gentleness, and patience are necessarily called for in the treatment of strictures. Further, when these organs are diseased, and we have to deal, in a given case, with several strictures of very small calibre of the pendulous urethra, two courses compatible with safety are presented, viz.: gradual dilatation alone, or internal and external urethrotomy, leaving a few days between the internal and external operation, the latter being done first. 7. Quinine, in any quantity, exerts no manifest influence over the course of urethral fever. 8. Boric acid, internally, by its resolvent and antiseptic action, doubtless does exert a favorable influence upon the disease, and will prove a prophylactic if given some days before operating. 9. With a further view to prophylaxis, both before and after all operations upon the urethra—even simple catheterism—the canal should be injected with some mild antiseptic. This is more essential after each act of micturition subsequent

to internal urethrotomy. 10. When urine fever persists despite all treatment, or should it, after any operative interference with the urethra, jeopardize the patient's life, perineal section should certainly be done.

312. *Stamm on a Small Solid Tumour in the Left Inguinal Region caused by a Fish-bone.*—The following case, on account of its rarity and difficulty of diagnosis seems worthy of publication.—C. I., æt. 63 years, began to notice an enlargement in the left inguinal region about the end of last February, which at times caused some slight pain, and during the last two months seemed to increase rapidly in size. On examination a hard, slightly nodular tumour was found, situated about 2 inches above Poupart's ligament running parallel to it and about the size of a large thumb. It was not specially painful on pressure and could apparently be lifted off from the peritoneum. Examination per rectum revealed nothing abnormal, no connection between the bowels and tumour could be traced. As it was so hard and not really painful on pressure, an abcess was excluded in the diagnosis; it was also too solid for a lipoma. The thought of a foreign body was also entertained, but then more pain and some fluctuation might have been expected. Taking the age of the patient into consideration, and the circumscribed, hard and nodular condition of the tumour, Dr. Stamm admitted that the diagnosis of a cancer could not be easily dismissed, but thought it, however, a wise plan to keep the diagnosis in suspense until the knife would unravel the secret. On August 6, 1889, an incision about 2½ inches long was made over the swelling through the obliqui muscles, and then the tumour was found to be really formed by the thickening of these muscles. This infiltration was again caused by a fish-bone lying in a vertical direction over the transverse muscle. It was not encapsuled, nor was there any sign of former or present suppuration. The parts really presented such a fresh appearance as if the bone had been pushed in there shortly before the operation.

Medicine.

RECENT CASES.

313. Goodhart, Dr.—On Albuminuria. (*Guy's Hospital Gazette*, March 29th, 1890).

314. Peyer, Dr. Alexander.—On Sexual Asthma. (*Berliner Klinik März-heft.*)

315. Quisling, Dr. N. A.—Studies on Rickets. (*Arch. f. Kinderhlkde Bd.* ix. *and Deutsche Med. Zeitung, Feb.* 3.)

316. Hecquet, A.—On Rachitis. (*Ugeshrift fer Larger* 10—11, 89, *Deut. Med. Zeitung*, Feb. 3.)

317. Lagerhans.—On a Case of Acute Pancreatitis. (*Wienir Med. Wachruschr.*, 1890, No. 11.)

318. Lepine, Dr.—On High Temperature in Uræmia. (*Revue de Médecine.*)

319. Michaelson, Dr.—On Albuminuria Retinitis of Five Years' Duration. (*Centralblatt für Augenheilhunde*, Dec., 1888.)

Art. 313. *Goodhart on Albuminuria.*—The *Guy's Hospital Gazette* for March 29th, contains a clinical lecture given by Dr. Goodhart, which is well worthy of record. The lecture treats of albuminuria without organic disease, which is known under the terms "functional," "physiological," "of adolescents," "cyclic" or "intermittent." Out of 39 cases, Dr. Goodhart found 26 males and 13 females. There is a very obvious reason for the presence of a small amount of albumen in the urine of men—viz., the close proximity of the prostrate gland and seminal ducts, the discharges of which may easily contaminate the urine.

Functional albuminuria falls readily into the following groups:—1. Oxaluric. 2. Lithœmic. 3. Hæmoglobinuric. 4. Albuminuria of the passage. 5. Neurotic albuminuria.

Oxaluria may be produced by eating a large quantity of rhubarb or some other vegetable containing oxalic acid, and so increasing the amount of oxalates excreted. The oxalate crystals have sharp corners and edges to them, and so possibly in their passage through the pelvis of the kidney, ureters, or bladder they may scratch the mucous membrane and produce albumen, or even blood, in the urine.

Lithœmia occurs at all ages, even in young children who are too heavily fed on solids, and not given enough liquid with their food; the food not being properly digested, the viscera are overloaded, and a highly concentrated urine is passed, which, with nitric acid, will show a copious deposit of nitrate of urea and some albumen.

Hœmoglobinuria. — In this condition, instead of the ordinary blood-coloured urine, of hœmoglobinuria albumen is passed. This is sometimes caused by a chill from a cold bath in the morning. A cause of this kind may be at the bottom of alubminuria which has been found to come on after bathing or exercise.

Albuminuria of the passage.—Eight of the 39 cases belonged to this group. A certain proportion in women are due to leucorrhœa, and in men are sometimes caused by a gleet or other venereal discharge, but the greater proportion is due to a natural seminal fluid or prostatic secretion. Albumen in these cases is present only in the early morning, and is due to nocturnal emissions and straining at stool.

Neurotic Albuminuria.—Seventeen of the 39 cases belonged to this group. Dr. Goodhart quotes one one case of a married lady, aged 30, who was very neurotic, and passed albumen in the urine—no evidence of kidney disease. Of a girl, aged 14, who was very neurotic; of a young man who was neurotic, and of two cases of exophthalmic goitre. As the theory for the cause in the cases, Dr. Goodhart suggests that when the higher brain centres are exhausted from hard work or worry, the lower centres being, so to speak, relieved of the inhibitory influence of the higher centres, may be in a turbulent condition, and hence give rise to intermittent discharge of albumen, a condition perhaps comparable to the flushing that occurs over the surface of neurotic women.

Francis Hawkins, M.D.

314. *Peyer on Sexual Asthma.* — Peyer endeavours to prove, by the help of 11 cases in the male and 5 cases in the female examined by himself, the existence of a sexual asthma analogous to the nasal and bronchial asthma. In almost all the male cases there was a history of spermatorrhœa, together with self-abuse and impotence, the asthmatic attacks following immediately on coitus, self-abuse, or other great sexual excitement. In addition, there were many other new asthenic indications present.

Morgan Dockrell, M.A., M.D.

315. *Quisling, Studies on Rickets.* — Dr. Quisling holds that at present it is not scientifically

established that acute rachitis and the common chronic form have the least to do with each other; that for many so-called cases of acute rachitis the proper name would be surbutus infantilis, for others ostitis, periostitis, or osteomyelitis. He has seldom observed fœtal rickets, but congenital rickets was found in from 3 to 10 per cent. of all new born children. Rickets generally begins between the sixth and eighteenth months; after the third year circumstances are unfavourable for the onset and development of rickets. As ordinary symptoms of the *earliest* period, he mentions pallor, sweats, restlessness, spasm of the glottis, disturbances of digestion. In the second stage are found wasting, sensitiveness to touch, anomalies of dentition, respiratory diseases. In the third stage appears alterations in the consistence and form of the bones, and often swelling of the veins and spleen. The extension of the disease to almost all organs points clearly to the hypothesis of a constitutional disease, which must be put in the general class of chronic inflammations, and which arises through a cause of probably irritative nature, acting directly through the blood or indirectly through the nervous system. He is sceptical on the question of hereditary rickets, and finds no material to indicate syphilis as a cause. On the other hand, he finds a want of fresh air the only acceptable explanation of two facts much too little considered, viz., the geographical distribution of rickets, and its prevalence in certain seasons of the year. He is less positive as to the harmfulness of digestive disturbances. It is true the contingent of breast-fed children in the first year of life amounts to 51 per cent. compared with 76 per cent. of bottle-fed children; still the difference of 25 per cent. may have other possible causes.

316. *Hecquet on Rachitis.*—Hecquet maintains that rickets is never found in breast-fed children, but only in those fed artificially, and that therefore the disease depends on faulty combination of the food elements. He had noticed that beasts in the Zoological Gardens very often are affected with a disease of the bone tissue, which is ascribed to the confinement. This "Zoological Garden disease" is certainly rickets, and affects the young, not fully-grown, beasts, whether born in confinement or not. The treatment, which consisted in the addition of bone-meal food, was unsuccessful until a fat-containing food was added. The result was then very satisfactory. Starting from this experience, Hecquet commenced his researches on the rachitic disposition, and now feels justified in asserting that the appearance of rachitic symptoms stands in close relationship with scrofula, and that every artificially-fed child who acquires rickets is really already scrofulous. He regards the stomach and bowel affection, giving rise to diarrhœa ablactatorum, on the first sign of rachitic digestive-anomaly, depending on the presence of too little fat in the food. The truth of his observations, he thinks, is confirmed by the good effect of his treatment of diarrhœa ablactatorum and rachitis with a fat-containing food. He gives boiled milk and oatmeal gruel in equal parts, with one to three tablespoonfuls of cream, and one teaspoonful of milk-sugar. This is to be prepared fresh each time, and given every two hours. Instead of cream other fat can be employed, as butter, cod-liver oil, or cocoa-butter.

G. D'ARCY ADAMS, M.D.

317. *Lagerhans on a Case of Acute Pancreatitis.*—The patient, a man aged 60, was suddenly taken ill with severe vomiting, headache, giddiness, and depression. Soon the abdomen began to swell (the next night). There was dyspnœa, also painfulness in the left hypochondium. On reception into the Charité Hospital, a transverse retraction of the abdomen was to be noticed above the navel. Above and below this there was great distension. There was slight fever, with weak pulse, and a few versolar spots, and typhoid fever was diagnosed. During six weeks the symptoms altered but little. Towards the end the vomited matter smelt as if decomposed. Within a fortnight afterwards the patient died. The *autopsy* showed complete necrosis of the pancreas, which lay in a sac formed by the surrounding organs, and containing a thick fluid, with remains of the vessels and some loose fatty tissue. Various openings led into the neighbouring intestine. There was extensive necrosis of fatty tissue. The appearances seemed most probably the result of a very acute inflammation of the pancreas.

318. *Lépine on High Temperature in Uræmia.*—The author reports some of the results of his observations in reference to temperature and uræmia. The temperature of uræmia is considered to be low when the substances which are excreted by the kidney are simply retained in the blood, and that a high temperature occurs when a reabsorption of the renal secretions takes place. He infers this from the fact that when a ligature is placed round the ureters, and above the ligature, a communication is established, with a reservoir of salt and water, sufficiently raised to produce pressure, which will drive the urine back into the circulation, the temperature rises very high; but if uræmia is produced by simply ligaturing the ureters, the temperature is low.

319. *Michaelson on Albuminuric Retinitis of Five Years' Duration.*—The author reports a case of long continuance of hœmorrhagic albuminuric retinitis of about five years' duration, in which the retinal changes and visual defects continued about stationary, and the albuminuria persisted. There was a history of syphilis some twelve years before the albuminaria, from which the patient had apparently entirely recovered. It seems probable that syphilis had some influence upon the retinal changes in view of the absence of any obscuration of the refractive media and of any visible changes in the retinal vessels. The earliest symptoms of ocular complaint was difficult in accommodation. The hœmorrhages were slight, widely scattered, and radiating.

Pharmacology and Therapeutics.

RECENT PAPERS.

320.—BROTHERS, DR. A.—On the Treatment of Croup. (*New York Med. Journ.*)

321. WAUGH, DR.—On Creosote in Phthisis. (*Times and Register.*)

322. PHILIPPI, DR.—On the Treatment of Acute Pneumonia by Inhalation of Chloroform. (*Bull. Gen. de Ther.*)

323.—REYNOLDS, DR. RUSSELL.—On Cannabis Indica in Neuralgia. (*Lancet*, March 22, 1890.)

324. DUJARDIN-BEAUMETZ, Prof. — On Diet in Uurinary Insufficiency. (*Medical Age.*)

325. On Diuretin. (*Apoth.* 3 and 9, 100, 1889, and *Deutsche Med. Zeitung*, Jan. 1, 1890.)

326. Brunner, L. F.—On the Treatment of Diptheria and Croup. (*St. Petersburger Med Wochenschrift.*)

327. Kassowitz Max.—On the Theory and Treatment of Rickets. (*Wien. Med. Wochenschr.*, 28-31, and 34-38, 1889.)

328. Gottlieb, Dr.—On the Mode of Action of Drugs which lower Temperature. (*Archiv. für exper. Path. und Pharm.*)

329. Prados O, Dr.—On the Curability of Hepatic Cirrhosis by Iodide of Potassium, a Milk Diet, and Jaborandi. (*Revista. Médica de Bogotá*, Ser. xiii., No. 144.)

330. Wolfler, Dr.—On the Mechanical Treatment of Erysipelas. (*Wiener Klin. Wochenschr.*, 1889, No. 23-25.)

331. Ostermayer, Dr.—On the Treatment of Burns with Potassium Sozoiodol. (*Deutsche Med. Wochenschr.*, No. 41.)

332 Ingalls, Dr. E. Fletcher.—On the Treatment of Cystic Goitre by Electrolysis. (*Journ. of Amer. Med. Assoc.*, Feb. 15, 1890.)

333. Licovish, R. F., M.D.—On Absolute Rest and Starvation in the Early Stage of Typhoid Fever. (*New York Medical Record*, March 8th, 1890.)

334.—Falk, Dr. E.—On Hydrastin and Hydrastinin. (*Virchow's Archiv.*, bd. 119, s. 389.)

335. Bremer, Dr.—On an Untoward Effect of Sulphonal. (*Canad. Pract.*, March 17, 1890.)

336. Voskresensky, Dr. A. P.—On the Dosage of Carbolic Acid in the Treatment of Malignant Pustule (*Vratch*, No. 4, 1890, p. 88).

337 Barkoff, Dr. Vladimir N.—Mercury and Carbolic Acid in Anthrax (*Novosti Terapii*, No. 6, p. 84).

338. Siebold, L., F.I.C., F.C.S.—On Arsenic in Glycerine. (*Pharmaceutical Journal*, Feb. 1890, p. 682.)

339. Abütkoff, Dr. A.—On the Action of Opium, Morphia, and Codeia on the Stomach. (*St. Petersbury Inaug. Dis.*, 1890, p. 34.)

340. Wilson, Dr. J. C.—On the Treatment of Scarlet Fever and Quinsy by Chloral Hydrate. (*Journ. of Amer. Med. Assoc.*, March, 1890.)

Art. 320.—*Brothers on the Treatment of Croup.*—Dr. A. Brothers suggests that the treatment of croup proper divides itself into the treatment of three varieties:—(1) Simple catarrhal laryngitis; (2) fibrinous bronchitis or ascending croup; (3) pure diphtheric croup. For cases of the first group—ipecac., antimony wine, or subsulphate of mercury with warm applications to the throat and chest, usually meets the requirements of the case. If dyspnœa is very bad, a hot mustard bath is suggested. In cases of the second group, in which Dr. Brothers points out the prognosis is serious, he suggests an atmosphere of steam either from slaking lime or a steam kettle, and in support of this points out how Jacobi claims to have saved a patient by keeping him in a bath room in an atmosphere opaque with steam. Further treatment is recommended, such as poultices to the neck and chest, and free stimulation. As regards operative treatment in these cases, Dr. Brothers thinks tracheotomy of greater advantage than intubation. He thinks the chances of recovery when stenosis occurs in these cases is very poor. In the third group of cases he suggests putting the patient at once on large doses of the bichloride of mercury, under which treatment he asserts that he has seen cases in which the croup has entirely disappeared in twenty-four hours. If dyspnœa and cyanosis become extreme, intubation of the larynx is recommended, which, in most cases, is followed by good results. In all these groups the sick room is recommended to be kept at a temperature of 70° F. Nasal injections of boric acid, or other mild antiseptic preparations, are also considered useful.

321. *Waugh on Creosote in Phthisis.*—Dr. Waugh points out that the benefit of creosote in phthisis is due to its action in disinfecting the intestinal canal, for which purpose he recommends that it be given in pills, one-half grain each. It it is desired to introduce creosote into the body sufficiently for it to act as a germicide, so as to render it impossible for the bacillus to live, the best plan is to saturate the body rapidly by the hypodermic injection of creosote in liquid cosmoline, one part to twenty. A French physician claims to have injected by this method a scruple of creosote in one day. If creosote be given internally the dose must be increased to toleration in order to produce the germicidal action.

322. *Philippi on the Treatment of Acute Pneumonia by the Inhalation of Chloroform.*—Dr. Philippi records a case of a patient, aged 60 years, of alcoholic habits, who was seized with acute pneumonia. Some six years previously the patient had suffered from acute articular rheumatism. On the fifth day of the attack of acute pneumonia the patient suffered from collapse, loss of consciousness, Cheyne-Stokes respiration, small irregular pulse, with cyanosis of the face. Injection of ether having proved useless inhalations of chloroform and alcohol were given. The patient made a number of deep inspirations, but there was a sudden arrest of respiration; the chest was then rubbed with the liniment. At the end of one hour the patient had much improved—the pulse was stronger, the cyanosis had disappeared, and the state of collapse had passed away. In this way about two ounces of the mixture of chloroform and alcohol were used. [Why Dr. Philippi should report this case as one of inhalation is not quite clear. It is true the patient inhaled the vapour during the rubbing, but it is more possible that the favourable result was brought about by the continuous rubbing, which is extremely valuable in heart failure.—*Rep.*]

323. *Reynolds on Cannabis Indica in Neuralgia.*—Dr. Russell Reynolds, after having used cannabis indica for the past thirty years, has placed on record the cases in which he has found it useful, and cases in which it has been of no use; such an experience is of extreme value, and we therefore record it. Cannabis indica is of use in:—In senile insomnia, with wandering—when an elderly person is fidgety at night, goes to bed, gets up again, fusses about his clothes, and thinks he has an appointment to keep (such a patient may be quite rational during the day.) The dose in such a case has been ¼ to ⅓ of a grain of the extract given at bedtime. It is also useful in cases of night restlessness of patients with general paralysis, and in temper disease (Marshall Hall) in children, or in adults. In almost all painful maladies it is useful—neuralgia, periodic or not, and may be mixed with arsenic, especially in facial pain, in neuritis, with mercury, also very useful in migraine. It may be of use in lightening pains of the ataxic patient, and also the multiform miseries of tingling, formica-

tion numbness, and other paræsthesiæ, so common in gouty people. In clonic spasms, whether epileptoid or choreic in type. In eclampsia of children, from worms or teethings. In many cases of so-called epilepsy, but which Dr. Reynolds thinks are either eclamptic, or the result of organic disease of a gross character in the nervous centres. Cannabis indica is the most useful agent with which he is acquainted, such as for instance, violent convulsions in an over-fed man who has had a heavy supper. In cases also of brain tumour, in which epileptiform convulsions occur, followed by coma, and coma by delirium, at first quiet, and then violent, yield at once to Indian hemp. It is also most valuable in nocturnal cramps of old and gouty people, in some cases it relieves spasmodic asthma, and is of great service in cases of simple spasmodic dysmenorrhœa. Cannabis indica is *useless* in mania, uncertain in its action in alcoholic delirium, and best not used in melancholia, except when the case has merged into one of senile degeneration. It is almost useless in sciatica, myodynia, pleurodynia or lumbago, gastrodynia, enteralgia, tinnitus aurium, and so-called hysterical pains, true chronic epilepsy, general chorea, paralysis agitans, tirissmus, tetanus, and jerking movements of spinal sclerosis. The drug should be given with great care, and always obtained from the same source, as preparations vary in strength. The dose should be given in minimum quantity, $\frac{1}{6}$ of a grain for an adult, and $\frac{1}{10}$ for a child, which should be gradually and cautiously increased. The dose should be repeated every four or six hours, until either relief is obtained, or the drug is proved to be of no use; for children, a tincture containing 1 grain in 20 minims, but for an adult the tincture should contain 1 grain in 19 minims. It is best given in drops on sugar or bread.

324. *Dujardin-Beaumetz on Diet in Urinary Insufficiency.*—Two principles should form the basis upon which the dietary for patients suffering from urinary insufficiency, as also for albuminuric cases, is built, viz.:—(1) To prevent, as far as possible, the formation of poisonous products or toxines in the system; (2) To reduce to a minimum the quantity of toxines introduced into the organism. Hence all forms of meat should be forbidden, especially game, which is apt to be tainted, for it is an error to suppose the various sorts of meats do not contain ptomaines. As to aliments which may be given, the first place should be given to eggs well cooked, as they have no influence upon the production of albuminuria. Omelettes and starchy matters (especially pure), as of potato and peas; also green vegetables well cooked. For beverages, milk is especially recommended; and if any wine be taken, it should be white wine diluted with water. If any meat at all is allowed, it should be beef *à la mode*, chicken with rice, or fresh pork. From time to time a light purge may be given, and by rigidly adhering to the principles concerning diet above laid down, life may be prolonged for a long time.

FRANCIS HAWKINS, M.D.

325. *Diuretin.*—Under this name Knoll & Co., of Ludwigshafen-on-Rhine, have introduced, at the suggestion of Dr. van Schroeder, of Strasburg, and Dr. Gram, of Copenhagen, a new form of theobromin, namely, theobromin-sodii salicylate. Theobromin, which is nearly allied to caffein (caffein is tri-methylxanthin, theobromin is di-methylxanthin), like it, is a diuretic, but has several advantages. The following are Dr. Schroeder's and Dr. Gram's results:—1. Theobromin is a diuretic, with direct action on the kidney. 2. It differs from caffein in not exciting the central nervous system, therefore it does not cause loss of sleep, restlessness as, caffein does. Theobromin is, in a certain manner, a caffein, whose central action is wanting, whilst it possesses the action on the kidney, therefore it is a pure kidney remedy. 3. Theobromin has caused free diuresis in kidney and heart disease, even in cases where digitalis and strophanthus were useless. 4. Free theobromin is unsuitable for administration. It is only soluble in 1,600 parts of water, and is with difficulty absorbed and easily causes vomiting. The best form Gram found to be theobromin-sodii salicylate ("Diuretin"); this caused no unpleasant symptoms, even in very weak people. It is to be given in single doses of 1 gramme. and daily doses of about 6·0 gramme. Diuretin is a white powder; it dissolves on heating in half its weight of water, and remains a solution on cooling. Powder and solution must be kept well corked. The compound contains 50 per cent. of theobromin, and is much cheaper than theobromin.

326. *Brunner on the Treatment of Diphtheria and Croup.*—Brunner speaks very strongly against the commonly employed treatment by gargles and cauterisations, which in children are not only difficult to carry out but often give rise to injuries to the mucous membrane and thus to fresh points of infection for the disease. He relies chiefly on steam inhalations and general steam baths. The latter may be easily extemporised, when other means are wanting, by covering the bed with a sort of tent of blanket or waterproof and placing under the bed hot bricks on a tray which are from time to time to be sprinkled with water. The tent must be separated from the edges of the bed by about a hands breadth to allow the steam to ascend. In about ten minutes after the tent is filled with steam the patient breaks out into a free perspiration and his temperature begins to fall. According to the nature of the case the steam baths are to be continued for from 2 to 12 hours with pauses of half-an-hour every 2 hours, when a longer pause is made, the linen must be replaced by dry. He has treated the most unfavourable cases successfully in this way. Infants of seven months to three years bear the steam both wonderfully well. The pulse at first becomes quicker but not weaker; and the respiration more frequent, but it soon becomes quieter as the air enters the lungs more easily. The nourishment must be liberal, milk, broth, cognac, etc. After 2-4 days generally the pharynx begins to clear, but the baths are to be continued, at, of course, increasing intervals for even 14 days.

327. *Kassowitz Max on the Theory and Treatment of Rickets.*—The chemical theory that the cause of rickets is the want of lime in the bones is at present universally held. This is either from deficiency of lime in the diet, or from some fault of the digestion leading to its not being absorbed, or thirdly, from lactic acid being formed in the digestive canal, taken by the alkaline blood to the bones, and there either preventing the precipitation of the lime salts or dissolving the lime salts already deposited. Kassowitz holds this theory as untenable on many grounds, for instance, rickets has been found in a fœtus of seven months, and in many new-born children, in whom there can be no question of errors of diet. The season of the year has great influence on the development of severe cases of rickets. The curve of cases coming under observation mounts gradually in every year

during the winter and spring, attains its maximum in May and June, then gradually falls to a minimum in November. This curve has been noticed in many places in Europe. It shows that to the respiratory troubles and bad air to which the children of the poor (affording the largest proportion of cases) are especially exposed in these months, belong a predominating position in the etiology of rickets. An insufficient diet and faulty digestion naturally may also maintain an inflammatory irritation in the bone-forming tissues. But the deficiency of lime in the bones does not come from deficiency of lime in the diet, but from a local disease. The chemical theory must be replaced by the anatomical. Rachitis is a local irritation process, marked by the formation of vascular medullary spaces in the cartilage plethora of the periosteal layers and marrow. The slow deposition of the lime salts is explained by the disturbed circulation, as Virchow showed more than 25 years ago. Therapeutically he recommends starchy food after weaning, and as a supplement to milk. Iron and cod liver oil for the general health; salt baths and pure air, these are general remedies. For rickets itself, phosphorus is the thing. At least 25,000 children have been treated with it with the best results. The phosphorus is given in cod liver oil 0.01:100, a teaspoonful once daily (½ milligramme), no matter, apparently, what the age is. Cod liver oil was chosen as a vehicle because it is easily emulsified and cheaper than other medicinal oils. The addition of 5 centigrammes of saccharin makes the mixture agreeable. A concentrated solution of almond oil (0.2 per cent.) may be kept prepared, of this 5 grammes is added to 95 grammes of cod liver oil in emulsion. The concentrated solution does not alter on keeping. Even severe and advanced cases profit by this treatment, as do those complicated with pseudo-leukaemia. In the last the spleen soon regains its normal form. "Phosphorus is the specific for rickets, it is the iron of the rachitic."

G. D'Arcy Adams, M.D.

328. *Gottlieb on the Mode of Action of Drugs which lower Temperature.*—The author concludes this paper as follows:—"On the basis of the facts already known, and the experiments detailed in this article, the lowering of temperature which occurs after morphine, antipyrine, and quinine, may be said to take place somewhat as follows:—Antipyrine and small non-narcotising doses of morphine cause decided lowering of temperature in both healthy rabbits and in those in which the temperature has been raised by cerebral puncture. The cause of this lowering lies in the paralysing action of those substances upon those nervous regions of the brain, injury to which causes lowering of temperature. The rise of temperature caused by cerebral puncture, and the lowering which follows small doses of morphine or antipyrine, are, therefore, consequences of nervous action. In the case of cerebral puncture these induce either lessened heat, less or increased heat-production, or both together; and, conversely, morphine and antipyrine thus cause increased loss of heat, or lessened production of heat, or both. If a healthy rabbit and one which has been poisoned by morphine (0·01 to 0·029) or antipyrine (0·59) are kept in a warm chest at a temperature of 31° or 32° C., the temperature of the body, within slight variations, remains normal. Since, in this case, the loss of heat is reduced to a minimum, and since both normal rabbits and those treated with small doses of morphine or antipyrine nevertheless keep the same temperature, it follows that at this high external temperature regulation takes place by diminished heat-production, and this regulation is not disturbed by small doses of the above. Narcotising doses of morphia, or larger doses of antipyrine have the result that the animals no longer keep at the normal temperature when placed in a chest at 31° or 32° C., but a rise occurs. That is to say, the previous restriction, by nervous influence, of heat-production in a high external temperature, is now removed. Accordingly, small doses of morphine or antipyrine, by their paralysing action on certain cerebral regions, disturb the regulation of heat, the heat given off being increased; larger doses of these poisons remove the influence of a high external temperature upon the restriction of heat-production. Amongst the narcotic compounds of the fatty series, urethan was found to have the same effect as the above, *i.e.*, after doses of 1 gramme, animals remained at the normal temperature though exposed to an external temperature of 31° C. Quinine, in doses of 0·2 gr., acts similarly; and since this dose has only a slight influence upon the rise of temperature caused by cerebral puncture, it is not improbable that quinine does not lower temperature by altering the nervous regulation, but by direct action on the tissues, limiting chemical changes. Salicylic acid, nevertheless, seems to act directly on the nervous system, though in far less degree than antipyrine.

329. *Prados on the Curability of Hepatic Cirrhosis by Iodide of Potassium, a Milk Diet, and Jaborandi.*—After a few quotations from various authors, ancient and modern, on the good effects of milk in ascites, and from some modern authors on the power of potassium iodide to dissolve and remove fibrinous exudations, Dr. Prados O., proceeds to report two cases treated with perfect success. Case 1. A man, aged 50, alcohol distiller, had been ill four months, and presented a picture of chronic alcoholism. He had alcoholic dyspepsia, vomiting, tremors in hand and tongue, ascites, and œdema of ankles. The urine contained an excess of water, but no albumen. K.I. was ordered in frequent doses; also jaborandi, four grammes in an infusion every night. The only food allowed was milk *ad libitum*. Copious diuresis and diarrhœa soon set in, but abated by and bye, and in twenty days the patient declared himself well and resumed work. All the evil signs and symptoms had vanished, and abstinence from alcohol was solemnly promised. But about nine months afterwards he fell into his old habits, and was ill again as before. This time he was placed under different treatment, in the absence of the author, and died.

Case 2. A gentleman, æt. 40, no syphilitic history, had been a "drinker" for fifteen years, and showed the signs of alcoholic cirrhosis with ascites, subicteric tint of conjunctiva, and œdema of lower limbs. Treatment, as in last case, was begun in July of last year. The treatment had an astonishing effect, and by August he was allowed to take light solids in his food. This patient is still alive and in good health. In August of last year M. Lancereaux, of Paris, wrote on the same subject as the author, and the facts he cited have caused a veritable revolution. But in May and July of last year Lancereaux's work was not yet published, and therefore Dr. Prados knew nothing of it. His testimony, therefore, acquires additional force.

E. J. Edwardes, M.D.

330. *Wolfler on the Mechanical Treatment of Erysipelas.*—Wolfler has treated about 18 new cases of erysipelas by the method of surrounding affected parts with stout straps of sticking plaster. Only once was

the result, from extreme circumstances, unsatisfactory. In all other cases, especially in facial cases, it succeeded completely in arresting the progress of the disease. Almost in all cases the erysipelas manifested itself close up to the sticking plaster straps, the skin swelling considerably, a few days elapsing before it subsided. It is well also to place for security a second strap a few inches from the original. It is necessary to examine once or twice a day whether the straps have become loose. Occasionally, erysipelas oversteps the first strap by a few fingers' breadth, in a lessened intensity, there immediately to cease.

331. *Ostermayer on the Treatment of Burns with Sozoiodol Potassium.*—The sozoiodol potassium has proved to be an excellent remedy in cases of burns. It has, like iodoform, not only anæsthetic properties, but is capable of preventing suppuration. If in such cases the existing blisters are pricked, and the contents removed by wadding dipped in starch, or by sterilised water, and immediately covered with a 10 per cent. mixture of sozoiodol potassium and starch or venetian tallow, and then fastened up with a padded bandage, the most favourable results are seen within twenty-four hours. The process of healing goes on without any trace of suppuration. Not only can burns caused by steam and flames be healed by this, but also such wounds as have been caused through a corroding fluid.

Morgan Dockrell, M.A., M.D.

332. *Ingalls on the Treatment of Cystic Goitre by Electrolysis.*—After enumerating the various methods which have been employed in the treatment of cystic goitre, Ingalls states that his personal experience with electrolysis in two cases leads him to believe it cures more rapidly than, and is devoid of many of the inconveniences of other modes of treatment. Case 1. Female (age not stated), affected with cystic goitre of right lobe, an inch and a half in diameter. Aspirated on three occasions, blood and serum being drawn off. Finally an electrolysis needle was introduced into the sac, the opposite pole being placed over the tumours, and a current of six to ten Leclanché cells passed for about ten minutes. The operation was repeated four times. The cystic portion was entirely cured, and remained so cured three years afterwards. Case 2. A man with cystic goitre of several years' duration, age not stated. A cyst in the right lobe about 2½ inches in diameter. The cyst was aspirated, and three ounces of thin, dark blood drawn off. It was injected several times with solutions of carbolic acid in glycerine varying in strength from 5 to 95 per cent. The treatmen was of little or no benefit. Two platinum needles were then introduced into the cyst about an inch and a half apart, and a current from four diamond carbon cells passed through them for 20 minutes. After four such applications the cyst had quite disappeared, and a month later, when the patient was last seen, he continued well.

James B. Ball, M.D.

333. *Licovish on Rest and Starvation in Typhoid Fever.*—The author believes in the possibility of aborting typhoid fever by enforcing absolute rest and abstinence from food at the commencement of the attack and for six years he has carried out this treatment with satisfactory results. In treating typhoid the two chief objects he keeps in view are (i.) Maintaining the heart's strength; (ii.) Re-establishing the appetite. To maintain cardiac power he enforces absolute rest in the horizontal position until convalescence is well established. On no account must the patient rise even to the semi-recumbent position. He must be fed with a feeding cup and the bed pan used on all necessary occasions. Even the exertion of changing clothes is not allowed until all danger of doing so is past. To restore the appetite he instructs the nurse not to give the patient any nourishment until he calls for it, but to give water whenever required. Sometimes he allows four ounces of milk daily until the appetite returns, which usually takes place about the fourth or sixth day. The result of the treatment is soon apparent. The patient from being thus deprived of food after a few days says he feels hungry and asks for something he may fancy. When this is gained the battle is half won; for convalescence is soon established. By starvation the stomach gets rest, all effete material is carried off, the catarrhal condition of the alimentary tract reduced, the appetite is regained and at the same time the temperature either remains stationary for a few days or declines at once. At first nourishment should be administered with great care or a relapse may take place. When relapses occur they are due to, too early physical exertion, too early resort to solid food or overfeeding; or to mental excitement. After a normal temperature has been gained, at least a week should be allowed to elapse before the patient sits up and at least ten days before solid food is taken. The author's experience of over six hundred cases diagnosed as typhoid treated by absolute rest and starvation lead him to the following conclusions:—1. That typhoid fever may be aborted. 2. That to be so aborted the patient must be seen and treatment begun within the first few days of its onset—initial chill. 3. That our chief aim should be to restore the appetite, so that the patient may be nourished and rendered able to throw off the disease. 4. That to create an appetite the patient should be deprived of food until nature demands it; or if any be given, only in very small quantities at a time. 5. That the maintenance of the horizontal position so retards or prevents heart-weakness as to enable us to starve the patient without any risk. 6. That great care should be taken in feeding the patient after he has regained his appetite; for should it be again lost the temperature rises and a relapse occurs.

George Brown.

334.—*Falk on Hydrastin and Hydrastinin.*—(*a*) Amongst cold-blooded animals hydrastin causes:—(1) A tetanic stage, which commences with an increase of reflex irritability; (2) a stage of complete paralysis, which commences with paralysis of the motor action of the spinal cord; (3) paralysis of the heart, which first affects the inhibiting ganglia, and then the automatic ganglia; (4) it has a local effect upon the musculature. (*b*) Amongst warm-blooded animals:—(1) The paralytic stage begins earlier, and usually precedes the tetanic stage; (2) increased contraction of the vessels and blood-pressure follows stimulation of the medulla—this is, however, comparatively small, not persistent, but is interrupted by great falls of blood-pressure and vascular relaxation, especially during the tetanic attacks; (3) during the tetanus a lengthening of the pulse takes place through central stimulation of the vagus, the same occurs in the advanced stage of the poisoning; (4) paralysis of the vaso-motor centres follows upon their stimulation, after this and up to the period of death there is relaxation of the vessels and fall of blood-pressure; (5) death in poisoning by hydrastin takes place by paralysis of the heart. The action of hydrastinin is as follows:—(1) In warm and cold-blooded animals paralysis takes place through its effect upon the motor action of the spinal cord; (2)

it is not a heart poison; (3) contraction of the vessels takes place, in part apparently through stimulation of the vaso-motor centre, but especially through its action upon the vessels themselves as a result of the increase of blood-pressure. This at first appears periodically, is very marked, lasting, and interrupted by no periods of relaxation; (4) with the increase of blood-pressure goes a lengthening of the pulse due to central stimulation of the vagus; (5) the fall of blood-pressure occurring at death is a secondary effect, independent of the action of the hydrastinin, and capable of prevention by artificial respiration; (6) death takes place by paralysis of the respiratory centres. The results of the foregoing experimental observations go to prove that hydrastinin is a therapeutic agent of more valuable qualities than hydrastin, the true alkaloid of hydrastis canadensis. It has on the one side its peculiar vessel-contracting powers, which are more lasting and essentially stronger than those of hydrastin, and on the other, an absence of the stimulating action on the spinal cord, and a favourable influence on the action of the heart.

BERTRAM C. A. WINDLE, M.A., M.D.

335. *Bremer on an Untoward Effect of Sulphonal.*—As yet no well authenticated case of death following the use of sulphonal has been reported. Owing to this absence of directly traceable and immediate injuriousness, sulphonal has been recommended as an ideal hypnotic, having none of the after-effects of other remedies of this class. This is not the case, for in predisposed persons, it gives rise to untoward results, the same as other hypnotics. The fact that when it fails to produce sleep, a decided loss of equilibrium and a marked sensation of drunkenness is felt, ought to put us on guard as to its promiscuous and prolonged use. In various instances sulphonal has seemed to have a peculiarly dulling influence upon the mind in those already suffering from mental trouble. The author says his suspicion became a certainty when the following case came to his knowledge:—A gentleman of 43, of nervous temperament, had been troubled with various symptoms of neurasthenia, precipitated by heavy losses in business. For over two years insomnia was one of the complications, for which sulfonal was used with the most gratifying effect. While drifting, like the typical neurasthenic, from doctor to doctor, he remained true to his sulphonal, which he took at a dose of 30 grains, originally prescribed for him. In the last five months he is said to have used more than 10 ounces. More than four months ago his family noticed a peculiar change in his manner, manifesting itself under the form of apathy and listlessness. He would answer questions put to him after marked and painful delay, as if comprehension was laboured and unnaturally slow. Things and persons in whom he had formerly taken the keenest interest, became indifferent to him. He made mistakes in his books, which it took him a long time to discover; the computation of sums, formerly almost a matter of play to him, became laborious, and was at times impossible; naturally punctual in his affairs, he forgot his engagements; in short, his memory and judging power became visibly impaired, so that his partner suspected beginning softening of the brain, and insisted on an examination. During all this time the patient himself had no idea of his mental state, but did not show any surprise at the suggestion to withdraw temporarily from business and undergo a course of medical treatment. One week after the cessation of the drug, the first signs of mental improvement set in, marked by the declaration of the patient that he felt like awakening from a long sleep. After this, the recovery was very rapid, there being a perfect realisation on his part as to the danger he had passed through. His memory and reasoning powers are now absolutely normal.

ALFRED S. GUBB.

336. *Voskresensky on Carbolic Acid in Anthrax.*—Dr. A. P. Voskresensky, of Ardatov, highly eulogizes the treatment of malignant pustule by large doses of carbolic acid. In the course of the last four years the author resorted to the method in 16 consecutive cases of the disease of a severe type, referring to 12 male patients (including three boys, aged from 12 to 16) and four female, with malignant pustule on the face or upper extremity. Notwithstanding the circumstance that the patients came under observation as late as a third, fifth, or even seventh day after the development of the pustule, every one and all of them rapidly recovered. In all the drug was employed both externally and internally. Externally a 2½ per cent. solution (about six drachms of it) was injected around the pustule and into the adjacent apparently healthy zone, a 5 or 6 per cent. one along the margin of the lesion, and a 50 per cent. one deep into the middle of the pustule. On an average about 12 grains of carbolic acid was introduced subcutaneously within 10 minutes. In 10 cases the injections were repeated on the next or third day; in the remaining six any further injections proved to be superfluous. Internally a solution of 4 or 8 grains of the acid in 6 or 8 ounces of peppermint water, a table-spoonful every two or three hours for three days, was given, an average individual dose being half-grain, a daily one 8 grains. All general symptoms (giddiness, headache, nausea, prostration), however severe, disappeared almost immediately after the first injections. Within from one to three days the pustule transformed into a benign abscess, all swelling simultaneously melting away. In none of the cases any slightest toxic or unpleasant secondary effects were ever observed, the parts healing without any complications whatever. [The carbolic acid treatment of anthrax has found many ardent advocates in Russia, as may be gathered from papers by Dr. Jarnovsky in the LONDON MEDICAL RECORD, 1884, p. 499; Schaeffer, *ib.*, 1885, p. 192; Strizover, p. 438; Levantiieff, 1886, p. 538; Indutnyi, p. 538; Mishtolt, 1888, p. 281. All of these, however, employ more or less small-sized doses of carbolic acid, which are by no means reliable, according to Dr. Voskresensky's experience.—*Rep.*]

337. *Barkoff on Mercury and Carbolic Acid in Anthrax.*—Dr. Vladimir N. Barkoff, of Kasimov, warmly recommends the following plan of treatment of anthrax:—Having made a free crucial incision into the pustule, he cauterizes the wound with pure crystallised carbolic acid, and subsequently covers the part with a thick layer of gray mercurial ointment. In addition, he orders to make inunctions with the same salve around the pustule, repeating them three times a day (the daily dose of the ointment should be not less than one ounce). Besides, he prescribes carbolic acid internally, after the formulæ: ℞ Acid carbolici gr. vi.; aquæ distillatæ ʒ iv.; Syrupi Simplicis ʒ ss.; M.D.S.A tablespoonful five times a day. To prevent mercurial stomatitis, the patient should rinse his mouth with a solution of chlorate of potassium several times daily. Dr. Barkoff adds that he has recently tried the method in three cases of a very

severe variety, and that with striking success. All urgent general and local symptoms subsided in two or three days, though the patients had come under his care on the third, fifth, and eighth day of the disease. VALERIUS IDELSON, M.D.

338. *Siebold on Arsenic in Glycerine.*—After a series of experiments Professor Siebold has proved that glycerine has not the power of dissolving arsenic out of the glass of the vessels in which it is contained, nor is any arsenic that may be detected in impure glycerine derived from the solder of the tins in which it is stored, but all such impurity is due to the impurity of acids used in the manufacture.

RICHARD NEALE, M.D.

339. *Abütkoff on the Action of Opium, Morphia, and Codeia on the Stomach.*—Following the suggestion by Professor D. I. Koshlakoff, Dr. Anatoly D. Abütkoff, of St. Petersburg, has undertaken a course of interesting experiments on six healthy young men (hospital waiters), aged from 22 to 24, in order to elucidate the action of opiates on the gastric digestion, secretion of hydrochloric acid in the gastric juice, motor power of the stomach, etc. The drugs were always administered internally. In one group of the experiments the patients were taking this or that opiate once daily, during their breakfast (opium in half-grain doses, morphia in one-sixth, and codeia in one-quarter); in another group, every four hours, thrice daily (opium in one-third grain doses, morphia in one-sixth, and codeia in one-quarter). Each experiment lasted five days. The principal conclusions drawn by Dr. Abütkoff from his observations may be briefly summarised as follows:—1. Opium, morphia, and codeia distinctly retard the gastric digestion. 2. They markedly inhibit the secretion of free hydrochloric acid in the gastric juice. 3. They also lower a general acidity of the juice. 4. They weaken the juice's digestive power, and that solely in virtue of their inhibitory influence on the secretion of the acid. 5. They do not manifest, however, any influence on the rennet ferment. 6. The same holds true in regard to the absorptive power of the stomach. 7. As regards the intensity of the inhibitory effects, opium occupies the first place, codeia the last, morphia standing between. 3. In view of the inhibitory action, in all patients with a weak gastric digestion (with a scanty secretion of hydrochloric acid), opiates should be always administered not earlier than about two or three hours after meals, but in cases of gastric hyperacidity the drugs should be given during meals. [Therefore, on the whole, Dr. Abutkoff's investigations confirm the results obtained by Dr. A. Netchaieff and Professor V. K. Anrep; *vide* the LONDON MEDICAL RECORD, June, 1887, pp. 257 and 258.—*Rep.*]

340. *Wilson on the Treatment oj Scarlet Fever and Quinsy by Chloral Hydrate.*—Chloral Hydrate is highly recommended in scarlet fever in frequently repeated small doses of one to five grains, according to the age of the patient, as easy of administration and, being made palatable, well tolerated by the stomach, having a marked sedative effect, which is highly satisfactory; controlling the inflammation in a degree and extent both in the throat and kidneys, and preventing the complications and sequelæ, such as otitis media and glandular inflammation. In quinsy also, another writer says, a gargle of three or four grains to the ounce with glycerine is almost a specific.

Gynæcology and Obstetrics.

RECENT PAPERS.

341. HENSKE, DR.—On a Case of Uncontrollable Vomiting and Albuminuria during Pregnancy. (*Obstet. Gaz.*, March, 1890).

342. WARWICK, DR.—On the Relations between Menstruation and Insanity. (*Amer. Pract.*, March, 1890).

343. SPENCER, Dr. A. L.—On the Diagnosis of Placenta Prævia by Palpation. (*Am. Jour. Med. Science*, 1890.)

344. BRIGGS, Dr. W. A.—On the Treatment of Misplaced Labour. (*Occ. Med. Times*, March, 1890.)

345. HAWKINS, Dr.—On a Successful Case of Cæsarean Section. (*Obst. Gaz.*, March, 1890.)

346. SIMS, DR., H. MARION.—On Non-retention of Urine in Girls and Young Women. (*Med. and Surg. Reporter*, March, 1890.)

347. GIBB, Dr. J. S.—On a Case of Labour Complicated by a Fibroid Tumor: Cæsarin Section. (*Med. News*, March 29th, 1890.)

348. CURRIER, DR.—On Methods of Craniotomy. (Trans. Obst. Soc., 1890.)

ART 341. *Henske on a Case of Uncontrollable Vomiting and Albuminuria during Pregnancy.*—A pri para, aged 22, menstruated last in the beginning of Jum .1889. During August she began to suffer from nausea and vomiting; at first only in the morning, from 7 a.m. to 11 a.m., immediately after rising; but during September, the vomiting became more severe, commencing during the night and lasting all the morning. She vomited everything she took. At about this time she came under the author's observation, and all the ordinary remedies were prescribed in succession but without result, and the vomiting became almost continuous. When he saw her again, after an interval of several weeks, she was much emaciated and looked very ill, her face wore an aspect of anxiety, and there existed slight jaundice. Her bowels were unusually constipated, but sometimes her motions were loose and black. No physical sign of hepatic disease. No fever, heart and lungs healthy; uterus presented normal characteristics of five months' pregnancy; urine contained albumen and bile pigment, but no casts could be discovered. He prescribed hydrate of chloral, in one grain doses, every quarter of an hour, and iced milk. Three days later she was much better, had only vomited a few times, had kept down a considerable quantity of milk, and had slept fairly well. Next day when called in, he found her in convulsions. He at once administered chloroform to her and the convulsions ceased, having lasted for one hour and a half. After a coma of several hours she awoke quite confused, talked unintelligibly, and would not answer when spoken to. A few hours later she had another attack of convulsions which lasted about an hour, and was followed again by coma, from which she awoke in similar condition as before. Vomiting had ceased; the urine was very albuminous and contained casts. Chloral and bromide of potassium were administered; and he decided to induce miscarriage, which terminated naturally five hours later. During labour she had another attack of couvulsions, and had to be kept, more or less, under the influence of chloroform. There was considerable post-partum hæmorrhage; the fœtus was natural. She had no more convulsions after confinement, but remained comatose for about four hours, when she became gradually conscious, and ultimately recovered.

ALFRED S. GUBB.

342. *Warwick on the Relations between Menstruation and Insanity.*—As to prognosis and treatment, in young insane women, so long as amenorrhœa exists, mental recovery may be hoped for provided there be no other symptom indicating incurability. The cure of the amenorrhœa, without effect on the mental condition is of bad prognosis. Insanity apparently due to amenorrhœa is often not affected by curing the amenorrhœa. Insanity occurring only at the menstrual periods might be expected to be cured at the menopause. The treatment of nearly all cases of amenorrhœa in insane women is important, because in numbers of such cases, even where there is no evidence that the brain disease depends upon the menstrual disorder, the cure of the latter has a marked effect for good on the mental condition. In some cases of insanity the re-establishment of menstruation appears to be coincident with, and not the cause of, mental recovery. This statement seems true of only a certain number of cases, and not of all. A bad prognosis is indicated when the re-establishment of menstruation in not accompanied by mental improvement. He believes that the menstrual function, whether disordered or not, has a distinct effect on the mental condition of women. In some cases the menstrual disorder is premonitory of insanity. When amenorrhœa is the cause of insanity, the latter is often distinguished by melancholic symptoms, feelings of unworthiness, and morbid religious ideas. He lays great stress on the treatment of amenorrhœa and other menstrual disorders whenever they accompany insanity, although by many authors such treatment is not advised. It is worthy of note that out of the 30 cases where amenorrhœa existed, 14 suffered from melancholia in various forms. This bears out what has been remarked by other observers, that melancholia, with or without stupor and primary dementia, depend on, or are associated with, menstrual derangement more commonly than other forms of insanity.

343. *Spencer on the Diagnosis of Placenta Prævia by Palpation.*—The author reports seven cases of placenta prævia in which he diagnosticated, by abdominal palpation, the presence of the placenta in, or its absence from, the front wall of the lower uterine segment, the diagnosis being subsequently verified by internal examination. The cases were head presentations in multiparæ, before pains were present and the membranes had ruptured; no anæsthetic was used. In three cases the exact site of the placenta on the front wall of the lower uterine segment was determined; in two cases the placenta was felt when, by vaginal examination, it could not be found. The absence of the placenta from the anterior wall was diagnosticated in four cases. The patient should lie on her back for these examinations, the bladder having been emptied; the examination should be gentle, made in the absence of pains, prolonged for several minutes, or repeated if needed. When the placenta is in front of the head, it is felt as a spongy mass between the fingers and head. Its edge feels like the segment of a circle within which the touch is obscured; outside the child is plainly felt. Impulses to the head are not clearly felt through the placenta; impulses to the head through the abdominal walls are distinctly felt where the placenta is absent.

344. *Briggs on the Treatment of Misplaced Labour.*—After discussing the means available for detecting the abnormality in its early stages, the author concludes that:—1. The diagnosis of early misplaced pregnancy is beset with considerable, but not insuperable difficulties, and can ordinarily be made with certainty. 2. The steps in diagnosis are the establishment (*a*) of pregnancy; (*b*) of the absence of the ovum from the uterine cavity; (*c*) of its presence in either the fallopian tube or pelvic cavity. 3. Ova destroyed by electricity in the early months of misplaced pregnancy may be completely absorbed, or so nearly so as to leave no perceptible trace at their former site. 4. The treatment of early misplaced pregnancy (previous to the fourth month) should consist in: (*a*) Before rupture, the continuous galvanic current. (*b*) After rupture into the broad ligament, if hæmorrhage be slight and symptoms not urgent, the galvanic current; if considerable and symptoms be urgent, laparotomy. (*c*) After rupture into the peritoneal cavity, laparotomy.

345. *Hawkins on a Successful Case of Cæsarian Section.*—The patient, age 17, was a dwarf, 3 feet 5 inches tall, measured 30 inches about the hips, and weighed 55 pounds. She had menstruated last, Nov. 24, 1888, so she calculated she was at about full term. On making a digital examination per verginam, he found the pelvic diameters to be, antero-posterio, 1¼ inch, lateral about 3¼ inches, the deformity being due to a tipping forward of the promontory of the sacrum. There was no history of rickets. She was told that the only remedy was Cæsarian section, and on September 1 she was removed to St. Joseph's Hospital, to await the onset of labour pains. On Sept. 14, she began having very light labour pains at noon, and at 2 o'clock p.m., the bowels having been emptied by an enema, patient was put under the influence of ether and catheterized. He made an opening in the abdominal wall, through the linea alba, a couple of inches long; then passed the index and middle fingers of the left hand into the opening, and carried them up under the wall of the abdomen, dividing it between them with a pair of straight scissors. The incision was carried about four inches above the umbilicus, passing just to the left of it. This completely exposed the uterus, and he made one straight incision extending from the fundus to about the internal os, through the whole thickness of the uterine substance. The membranes were incidentally punctured at the same time, and the amniotic fluid escaped and the back of the fœtus protruded. It was a breech presentation. It was readily delivered, and handed to an assistant, while another tied the cord, and he himself looked after the afterbirth. The placenta was removed without difficulty, and while an assistant compressed the uterus, and held the cut edges together, he put in interrupted silk sutures about three-quarters of an inch apart, and tied them. These sutures were covered and supported by making the ordinary Lembert stitch of catgut to draw the peritoneum together. He did not dissect up the peritoneum, as advised by Sänger. The peritoneal cavity was then washed out with a 1 to 10,000 solution of corrosive sublimate, and the parietal wound closed by first closing the peritoneum with a continuous catgut suture, second by three silver wire sutures passed through the whole thickness of the abdominal wall, supplemented by superficial catgut stitches; the wound was dressed antiseptically, and a wide roller bandage applied to retain the dressings in place. The patient was then given a hypodermic of 15 grains of ergotine, to bring on uterine contraction, also one of ¼ grain of morphine, to prevent vomiting; put to

bed and surrounded with bottles of hot water. During the first twelve hours she was in a profound state of collapse from shock, so he gave her at intervals hypodermics of strychnia, ether, and brandy. By the mouth he gave a teaspoonful of champagne every fifteen minutes. The patient was somewhat troubled with nausea, and at first was supported mainly on champagne. On the third day the bowels were freely opened by a saline cathartic. The lochial discharge was quite similar to that of a natural confinement, and an occasional vaginal douche was given. The temperature never rose above 101¾°, and most of the time was 99° in the morning and 100° at night. The pulse ranged from 100 to 120. The baby, a girl, was fully developed, and weighed at the time of delivery 6½ lbs. It is living, thriving, and is nursed by its mother.

346. *Sims on Non-retention of Urine in Girls and Young Women.*—In an article on this subject it is observed that no disease is more annoying or more depressing to a patient than a disease of the bladder which calls for an almost constant evacuation of that organ. Frequent micturition is usually due to cystitis, or urethritis, or to the presence of a tumor or foreign body in the bladder, but at times it is due to indifferent causes. After a time in certain cases the walls of the bladder contract, owing to hypertrophy of the muscular layer, and the capacity of the bladder is reduced to one or two ounces. Such patients are obliged to urinate every few minutes during the day, and at night when asleep the urine dribbles almost continually. Dr. H. Marion Sims advocates the systematic use of injections of warm water to dilate the bladder and increase its capacity, for the alleviation and cure of this distressing condition; and reports a number of cures effected by the method. The apparatus used by Dr. Sims is a silver catheter attached by means of a rubber tube to a Davidson's syringe. He injects water, comfortably warm, to the bladder, by means of this apparatus until the bladder is distended. This is indicated by the sensations of the patient. The process is quite painful, and, sometimes, to the patient, "unbearable," and requires patience on the part of the physician and bravery on the part of patient to bring about good results. The injections are practised daily for one, three or more months, until the bladder will hold a pint of water, and then not so frequently. Improvement in the patient's condition and ability to retain urine usually keeps pace with the dilatation. The water injected should not be allowed to remain, but should be drawn off at the conclusion of each treatment. This method of treatment appears logical, and the results in the hands of Dr. Sims have been quite brilliant, as many of the cases had been the rounds of physicians and had been subjected to many methods of treatment. Apparently the only danger inherent in the method is the risk of rupturing the bladder, which could only occur under exceptional conditions of the walls of that organ, or when undue violence was used in giving the injection.

347. *Gibb on a case of Labour Complicated by a Fibroid Tumour.*—L. J., a primipara, aged 35 years, had always been in excellent health, never having been confined to bed. In April, 1889, she married, and two months thereafter found herself pregnant. During her pregnancy she enjoyed exceptionally good health. Her labour began Friday, March 7th, 1890, in the early morning. During the day the pains were slight and infrequent. Late in the evening the pains became aggravated. Her general condition was excellent. Vaginal examination revealed a capacious pelvis. The progress of the finger in the vaginal canal was arrested by the presence of a large body which was apparently felt through the thinned-out uterine wall. The os could not be detected by the examining finger. It seemed as though some portion of the child was presenting, pushing down before it the thin uterine wall and the upper portion of the vagina, and displacing the os to a position back of the symphysis pubis and out of the reach of the examining finger. Abdominal palpation revealed a peculiarly oblique position of the uterus and its contents. The head was evidently below and to the left, and in the abdominal cavity, whilst the extremities occupied the right hypochondriac region. The fœtal heart-sounds were heard with the most distinctness about two inches below the umbilicus, a little to the left of the median line. The next morning the condition remained unchanged—if anything, the uterine contractions were less frequent. The os still occupied a position too high to be reached. The patient was still very cheerful and was engaged in light domestic duties about her room. The uterine contractions increased during the night. The os was found high up at the back of the symphysis, somewhat dilated—sufficiently so, however, to enable the examining finger to detect the head. It was now apparent that the body above referred to was not part of the child, but a *tumour* in the pelvic cavity, diminishing its calibre to such a degree as to preclude the possibility of the head passing. This tumour occupied the posterior portion of the pelvic space, encroaching forward to within one or one and one-half inches of the symphysis pubis. It seemed firmly fixed in the pelvic outlet. The diagnosis, however, was still very difficult, in consequence of the high position of the os. It was decided to anæsthetize the patient to map out more fully the position of the growth, and then to do whatever might be considered necessary while she was in this state. Accordingly, a consultation was held at 6 p.m., March 9th, and after the patient was thoroughly anæsthetized it was apparent to all present that the growth was a solid or semi-solid tumour, situated between the uterus and rectum, and pushing the upper portion of the vagina down before it into the pelvic cavity. It was equally apparent, the tumour being fixed and immovable, that it would be impossible to draw the head through the narrowed pelvic outlet without great and irreparable damage. Abdominal section was decided upon and the abdominal wall was shaved to the pubes and thoroughly cleansed. Towels soaked in the bichloride solution being placed around the seat of operation. An incision was made in the abdominal wall, extending from an inch above the umbilicus downward to a length of 5½ inches, and rapidly carried down to the peritoneum. This membrane being incised to the same length as the abdominal wound revealed a uterus at full term, well and firmly contracted around its contents. A spot was selected at the upper portion of the body of the uterus and an opening sufficiently large to introduce a finger made with a scalpel and then rapidly extended to a length of 4 or 5 inches. The hand was immediately introduced into the organ and grasped the first presenting portion, which proved to be an arm; a foot was then grasped, the child turned and rapidly delivered. The child was asphyxiated and evidently suffering greatly from the prolonged compression to which it had been subjected. The placenta was attached a little to the left of the line of incision, and, almost immediately after the delivery of the child, appeared at the incision and was quickly delivered. The uterus was now thoroughly

freed from clots. Some difficulty was experienced in obtaining a complete and satisfactory contraction of the organ, but finally this was secured and the sutures were introduced. The time occupied from the first incision to the introduction of the first stitch in the uterus was nine minutes. There were ten deep and about the same number of superficial Lembert stitches introduced After having secured the uterus from leakage the hand was passed into the abdominal cavity behind the uterus, and thence down into the pelvic cavity, to locate and, if possible, remove the growth which had caused the difficulty. The tumor was found to be a pedunculated fibroid, springing from the centre of the posterior surface of the body of the uterus by a short and thick pedicle, and occupying a position partly in the abdominal and partly in the pelvic cavities. Its position in the pelvic cavity was in the posterior (Douglas) cul-de-sac. It had pushed the vagina downward and forward and had compressed the rectum back toward the sacrum. All of the pelvic cavity was occupied by this growth save a space anteriorly of about 1 by 1½ inches. The growth had contracted firm adhesions in front of the uterus and vagina and posteriorly to the rectum. Laterally the adhesions were not so firm. Nevertheless, it was immovable and fixed. It was deemed advisable to remove the growth, the adhesions were, therefore, broken up with the finger, the tumour brought into the line of incision, the pedicle ligated and the tumour removed. The bleeding from the torn adhesions was somewhat free, but not sufficiently so to demand ligatures. The abdominal and pelvic cavities were flushed with large quantities of hot water (which had been previously boiled) until the water returned uncolored. The cavities were then thoroughly sponged out until it was felt assured there were no bleeding points left. The abdominal wound was closed by eight or nine deep and four or five superficial stitches, a glass drainage-tube introduced into the pelvic cavity, the wound dressed in the usual antiseptic manner, and the patient put to bed and surrounded with hot bottles. The entire operation lasted one and a half hours. The patient did not rally in a satisfactory manner. During the first twenty-four hours there was constant retching and nausea, though no vomiting. By the evening of the first day the belly had become slightly distended and tympanitic temperature rose to 100°, pulse still remained about 150 or 160. The second day ushered in still more tympany, increase of nausea, and some vomiting; a feeble running pulse, temperature ranging from 100° to 101°; and marked evidence of peritonitis; she died fifty-eight hours after the operation.

348. *Currier on Methods of Craniotomy.*—The author advocates craniotomy under the following circumstances:—1. Application of the forceps for a long time without appreciable progress, or cases of version in which it is impossible to extract the head. 2. The certainty that the fœtus is no longer living. 3. Such a condition of the mother that the Cæsarean operation would almost with certainty be followed by death. 4. Certain varieties of deformity of the fœtus. The method of craniotomy will vary according as there is a greater or lesser degree of pelvic deformity. In the latter case the method which is to be preferred will depend in great measure upon the character of the efforts which have already been made. If the forceps have been used unsuccessfully, the vertex of the fœtal head should be perforated and the forceps then used as a tractor. In the higher degrees of pelvic deformity the method will consist, first, in podalic version and extraction of the body; second, in perforation through the palatal process; third, in cephalotripsy; fourth, in extraction of the body by means of the cephalotribe or by traction upon the body and the inferior maxilla, combined with pressure above the pubes. The advantages of this method are:—1. The base of the cranium is more effectually destroyed. 2. The head is firmly fixed during perforation and destruction of the brain. 3. The position of the head may be varied, the cephalotribe being applied in different directions, so as to adapt the smallest diameter of the crushed skull to the proper diameter of the pelvis. 4. The head having been crushed, it will be more easy to exert traction upon the jaw and the body of the fœtus, combining suprapubic pressure therewith.

Diseases of the Nervous System.

RECENT PAPERS.

349. SACHS, DR. B.—On a Case of Progressive Facial Hæmiatrophy, with some Unusual Symptoms. *Medical Record*, March 15, 1890.)

350. LOYD, DR.—On Epilepsy, Treated by Trephining and Excision of the Motor Centres. (*Journal of Nervous and Mental Diseases, New York*, June, 1889.)

ART. 349. *Sachs on Progressive Facial Hemiatrophy.*—E. K., a Russian, aged 19, single, entirely well till one year ago, when she noticed a peculiar appearance of skin just below left nostril, and a thinning of the face below left eye, and above left angle of mouth. No history of antecedent mental trouble or bodily illness. A healthy, robust-looking girl. Right half of face well developed. Distinct atrophy of middle and lower third of left half of face, involving skin, fats, muscles, and bone. The masseters stand out prominently, and present one of the unusual symptoms. At intervals of a few seconds a series of clonic and then tonic contractions of the temporal and masseter muscles can be observed. During this time it is impossible for the patient to open the jaw, and as the spasm extends to the tongue, and sometimes begins with it, speech is impossible during these contractions. These muscular spasms occur frequently, and are more apt to follow on excitement or cold. Measurement from middle of chin to angle of jaw, left side 11 ctm., right side 12½ ctm.; from upper margin of naso-labial fold to middle of ear, left side 10¾ ctm., right side 11½ ctm. There is distinct atrophy of the left half of the tongue, and of the left half of the floor of the mouth, another unusual symptom. There is no peculiarity of the skin, except slight pigmentation of the left upper lip. The eyebrows and eyelashes are normal. There is no unnatural sweating. Tactile pressure and temperature seem normal. Taste, smell, and hearing unaffected. Ocular movements, and pupillary reflexes normal. Faradic response of temporal and masseter muscles, and of facial nerves normal, though naturally movements of right face muscles appeared more vigorous. Repeated thermometric measurements of external ear showed a difference in favour of right ear of one degree. In this case it was evident that the affection involved motor fibres of the trigeminus and hypoglossal nerves, as well as the trophic fibres, else the unusual symptoms of the case, the motor spasm, could not be explained. Spasms of the masseter and temporal muscles are not mentioned in any of the records Sachs was able to consult. Atrophy of the tongue seems of more frequent occurrence. James B. Ball, M.D.

350. *Loyd on Epilepsy, Treated by Trephining and Excision of the Motor Centres.*—The patient was a man of about 35, who had suffered from epileptic fits for 14 years. Previous to the operation he had from 15 to 28 seizures daily. On each occasion they were preceded by a sensory aura running from the index finger of the left hand, which first began to twitch. This was rapidly followed by convulsive movements in the left arm and left side of the face. Occasionally these parts alone were involved, with a slight loss of consciousness. When the motor convulsions became almost general, there was greater loss of consciousness The left side was almost more affected than the right. In the intervals between the attacks, the fore and middle fingers and muscles of the left side of the face were evidently paretic. The operation was performed by Dr. J. B. Deaver, and consisted in exposing the middle and lower portions of the ascending frontal and parietal convolutions, and in removing the portions of these convolutions which were found by direct faradic stimulation to preside over flexion of the fingers and contraction of the fascial muscles. Up till the time when the case was first reported, three months after the operation, there had been no convulsive seizures except a very few minor attacks during the first days. Paresis of the left fore and middle fingers, and of the left face persisted. A few weeks after the patient was reported to have had an epileptic attack. From that time till his leaving the hospital six months later he had 10 more seizures, which seem to have been similar in character to those from which he suffered before the operation. The sensory aura and localised character of the fits accompanied by the incomplete loss of consciousness were reproduced as before. These seizures were nearly always nocturnal. The patient at this stage suddenly left the hospital, and was lost sight of, but was afterwards seen by the writer, Dr. Hendrie Loyd, riding a horse barebacked in the streets of Philadelphia. Dr. Loyd explains the failure of the operation entirely to remove the disease by supposing that portions of the brain bordering on those removed may have been insensitive to the faradic stimulation, which was the only means used for determining the localisation. These portions may have thus escaped removal, though participating in the causal irritation. He remarks that the corrosive sublimate solution which was used for douching the wound has the effect of diminishing the excitability of the surface of the brain substance, and also dwells on the difficulty of ascertaining the area of brain exposed by the small opening made by the trephine, and the consequent uncertainty that the entire cortical substance governing the muscles affected by the fits had been removed. Dr. Loyd also mentions the possibility of the renewed spasms being caused by irritative changes going on during the process of cicatrisation. Frank has claimed that a distinction exists between the spasms produced by irritation of the cortex, and irritation of the descending fibres below. In the cortex alone we have the true clonic epileptiform phenomena, while irritation of the motor descending fibres produes a spastic reaction. We need therefore not wonder to see tonic spasms following on the formation of the scar, which involves the white substance underneath; but in the case related the return fits were clonic, and in every way similar to those before the operation. This would point to the conclusion that the return of the fits is to be explained by the persistence of some irritated or diseased portion of cortical tissue.

William W. Ireland, M.D.

Pathology.

RECENT PAPERS.

351. Williams, Charles B. — On Aneurismal Dilatation of the Pulmonary Artery and its Primary Branches. (*Medical and Surgical Reporter*, March 15, 1890.)

352. Hatfield, Dr.—On Two Fatal Cases of Biliary Cirrhosis. (Trans. of the Amer. Pediatric Soc.)

353. Biggs, Dr. H. M.—On Pancreatic Hæmorrhage. (*Medical Record*, March 29, 1890.)

354. Biggs, Dr. H. M.—On Aneurism of the Basilar Artery. (*Medical Record*, March 29, 1890.)

355. Martin-Durr, M.—On a Case of Jacksonian Epilepsy (*Bull. de la Soc. Anat. de Paris*, 1890, p. 100).

356. Osler, Dr.—On Cardiac Thrombi. (Johns Hopkins Hospital Reps., vol. ii., No. 1, p. 56.)

357. Chiari, Dr. O.—On the Localisation of Angina Phlegmonosa. (*Weiner Med. Wochenschr.*, 43-89. *Deut. Med. Zeitung*, March 24.)

358. Thoma, Dr.—On a Peculiar Parasitic Organism in the Epithelial Cells of the Carcinoma. (*Fortschrith der Medicin*, bd. 7, No. 11. Extracted in *Centralblat f. Allgemeine Pathologie*, vol. i., No. 5.)

359. Bouchard, Ch.—On the Role of the Local Tension in Infectious Diseases. (*Centralb. f. d. Med. Wissench.*, 1890, No. 5.)

360. Chiari, Prof.—On a Case of Universal Multiple Atheromata. (*Wiener Med. Worchenschr.*, 1890, No. 11.)

361. Kirchner, Dr.—On Extravasation into the Nerve Sheath of the Chorda-Tympani, from Diphtheria of the Tympanic Cavity. (*Centralblatt für Algemaine Pathologie, U. Pathologische Anatomie*, Bd. I., Jan. 1890.)

362. Benario, Dr.—On a case of Congenital Defect of the Musculus Pectoralis Major et Minor, but with unusual Cutaneous Development.

363. Yamagiwa, Dr. — On the Etiology of Jacksonian Epilepsy. (*Virchow's Archiv.*, bd. 119, s. 447.)

364. Silbermann, Dr. O.—On Death after Severe Skin Burns. (*Virchow's Archiv.*, bd., 119, s. 488.)

365. Osler, Dr.—On Fever of Hepatic Origin. (Johns Hopkins Hospital Reps., vol. ii., No. 1, p. 3.)

Art. 351. *Williams on Aneurismal Dilatation of the Pulmonary Artery and its Primary Branches.* - Before the Philadelphia County Medical Society Dr. Charles B. Williams read an interesting paper on "Aneurism of the Pulmonery Artery," of which the following case was the text:—The case was mistaken for subclavian aneurism, but, it being mostly interesting pathologically, we omit the clinical remarks made in the paper. The patient from whom the specimen was taken was a man aged 40, coloured, a labourer, with a negative family history, but who had had, at the age of 22, gonorrhœa and chancroid. In 1875 he had specific disease and chancre, but no secondary symptoms followed. In 1879 he took a severe cold, which was followed by a cough, and during this time he had a slight hæmorrhage, the blood being light coloured, Two months later he had hœmoptysis, the blood being dark coloured. In a short time the patient became very weak. On admission he had dyspnœa, but no pain. On July 21, 1887, the following clinical report was made:—Dulness on percussion below the left clavicle from the sternum to the shoulder-joint; a low systolic bruit is heard over this region, as well as a very perceptible thrill to the fingers; the systolic bruit is propagated over the whole cardiac area, and into the axilla; maximum intensity at junction of the first intercostal space with the sternum; there was no bulging whatever; no cardiac conditions were noted; the left radial and axillary pulse is weaker than on the right side; he has frequent pains shooting down the left arm. The patient, who was treated with iodide of potassium, left the hospital in December, 1887, and was not seen again until 1889, when he returned with profuse hœmoptysis. During the interval from 1887 to 1889 the patient had been fairly well, attending to his ordinary business engagements. Physical signs showed both lungs to be tuberculous. The cardiac signs were as follows:—No bulging in any part; first left interspace from the boundary of the sternum outward, about two inches, was a very distinct thrill, but no expansile pulsation; apex beat very feeble, and only felt in the fourth and fifth interspaces within the nipple line when the patient was leaning outward or on full and held inspiration: Ausculation of the heart; at apex of heart a low-pitched systolic murmur was heard; second sound clear. Over the xiphoid cartilage a ringing second sound was noted, and a high-pitched systolic murmur. Over a portion of the chest there was a loud systolic bruit; no diastolic murmur. A systolic murmur could be heard faintly in the left carotid, and likewise a loud murmur above the left clavicle. The murmur was faintly heard in the left axilla, a faint murmur in the left supra-spinous fossa, but none elsewhere in the back. Right radial artery, normally full tension; left radial artery, scarcely perceptible. *Autopsy:* — Pleuræ generally adherent; tuberculosis of both lungs. On examination of the heart and arteries an aneurism was found of the pulmonary artery and its primary branches; the pulmonary artery for about 4 inches from the heart was dilated symmetrically, the dilatation extending also to the primary branches. There was no sacculation, the form being more like that of a fusiform aneurism. The cavity at the greatest diameter of its dilatation was about 2 inches, and corresponded with the position of the ductus arteriosus. The ductus arteriosus seemed wider than normal, and on the pulmonary side appeared to be patulous. On the aortic aspect it was normally closed. Inner coat of pulmonary artery showed no disease, and was not the seat of fibrinous clots, but contained chicken fat clots. The aorta showed several atheromatous patches.

352. *Hatfield on two Fatal Cases of Biliary Cirrhosis.*—The author records the following notes of the *post-mortem*:—Gross appearances of the liver: 5 by 2¾ by 1⅜ inches, dark blackish-brown, surface uniform in colour; capsule unchanged. On palpation firmness is normal; the cut surface presents the same colour as the serous surface, with a superficial tinge of greenish-yellow added, flecked with very minute whitish specks and streaks, which suggest possible cirrhosis; not much blood in branches of vena cava, their surface greenish-yellow, not stained, but surface quite moist and apparently somewhat softened. Spleen: small petechial spots scattered through the organ. Apparently much enlarged; dark red in appearance, very soft, cut surface deep red colour, soft, moist. Malpighian bodies hardly distinguishable, trabeculæ not distinguishable. Lung: greenish-yellow tinge over all; areas of red blotches; vessels not visible; blood seems to be partially washed out; floats but not freely, consolidation not certain; firm and elastic to touch. Pancreas: organ somewhat firmer than normal on palpation, greenish-yellow tinge over and throughout the organ. Microscopical examination of liver: 1. There is a large number of circumscribed, circular, and ovoid, occasionally branching islands of connective tissues which surround the gall-ducts. Occasional aggregations of lencocytes lie in the periphery of the lobules, but in no case surround them. 2. The capillaries are apparently thicker than normal, and in large areas of the tissue are irregular in size, contour, and distribution; they contain a few leucocytes. In many places the amount of connective tissue which represents the reflections of the capsule of glisson is largely in excess of normal. 4. Scattered over the sections in much the same general manner as the islands of leucocytes are distributed in chronic syphilitic hepatitis there are clumps of small round solid nuclei, whose arrangements is that of those surrounding a gall-duct in some cases, and in others so strongly suggests the same arrangement that there can be little doubt but that they are such. 5. The petechial spots, mentioned in the description of the gross appearances, cannot be seen in the stained and clear section. 6. The capsule is moderately thickened. 7. The greenish-yellow stain, mentioned in the description of the microscopic appearance, is due to (*a*) a granular pigment, which is distributed irregularly in the lobules, but which, taken in relatively large areas, is considerably more abundant in some parts of the sections than in others; (*b*) a greenish-yellow stain, which, lenses of a power of 325 diameters, does not resolve into granular matter. 8. The central veins of the lobules cannot be clearly made out. Lung tissue: 1. There is a small number of areas in which the alveoli are filled with epithelical cells and leucocytes. Their areas vary in size, but are small. 2. The connective tissue which surrounds the arteries is in most cross sections increased in amount, and in some markedly so. 3. Throughout the section there are areas of hœmorrhagic extravasation. Some of these are quite large, and are evidently the petechial spots mentioned in the description of the gross appearances of the tissue. 4. The pleura is apparently thickened, and there are long slender processes of connective tissue, which extends from it down into the tissue of the lungs.

353. *Biggs on Pancreatic Hæmorrhage.* — The author, at the New York Pathological Society, showed a specimen of pancreatic hæmorrhage, which had been removed from the body of an unknown man, who had gone into a saloon and taken a few glasses of beer, then went outside and fell down dead on the pathway. At the time the autopsy was made considerable decomposition was present; and nothing could be found except a hæmorrhage around the pancreas, and a number of minute hæmorrhages within the organ. Not much could be determined concerning the changes in the pancreas, owing to the degree of decomposition. The case was regarded as one of sudden death, due to pancreatic hæmorrhage.

354. *Biggs on Aneurism of the Basilar Artery.*—At the Pathological Society of New York, Dr. Biggs exhibited a specimen of an aneurism of the basilar artery, which was obtained from a patient, a young man, aged 31, who had gone to his work in the

morning in good health. After working for about half-an-hour, he complained of a severe head-ache, owing to which he could not continue his work. He went down to the lower floor of the house in which he was working, laid down on the floor, and died almost immediately. At the autopsy a large hæmorrhage was found at the base of the brain, and over the convexity of the cerebellum the vessels at the base were injected; and a small aneurism was found at the side of the basilar artery, just before its bifurcation. The other organs were normal, and there was no definite cause for the aneurism.

FRANCIS HAWKINS.

355. *Martin-Durr on a Case of Jacksonian Epilepsy.*—The patient, a male, aged 42, was, nine days after his first attack, threatened with rapid death from constant epileptic attacks. On this account he was trephined, after which operation the condition much improved for a short time, but death took place the same evening. At the *post-mortem* examination there was found on the right side of the brain, at the level of the corpus callosum in the middle of the white substance corresponding to the inferior extremity of the left frontal convolution, a reddish-brown focus of the size of a child's marble. It was surrounded by two concentric zones, an internal, yellow, and slightly softened, and an external of white substance. Lower sections showed that the focus was contained entirely in the white substance of the inferior part of the ascending frontal convolution, and that the region of the insula was intact. The histological examination showed that the focus above mentioned was on old hæmorrhagic one.

356. *Rare Forms of Cardiac Thrombi.*—The following forms of thrombi have been met with in the heart chambers:—1. Globular thrombi, the vegétations globuleuses of Lænnec, which occur not unfrequently; they possess sub-trabecular ramifications, and are common in the auricular appendices and in the apices of the ventricles in cases of extreme dilatation. 2. mural thrombi, which are not very uncommon, and are generally laminated. They occur in the dilated auricles, and particularly in their appendices, in the ventricles in cases of fibrous myocarditis and in aneurism of the heart. 3. Pediculated polyp-like thrombi, met with usually in the auricles. These are very rare, Hertz having only been able to find nine cases in the literature of the subject. 4. Ball-thrombi free in the auricles. These are excessively rare, only five cases having been recorded The author gives an account of the following cases:—i. Large ball-thrombus, free in left auricle, mitral stenosis in female, æt. 35. These structures are probably globular thrombi detached from the auricular appendix, which, being too large to pass through the narrowed mitral orifice, are kept rotating in the auricle, growing constantly by the accretion of fresh layers of fibrin. ii. Mitral stenosis of extreme grade. Enormous dilatation of left auricle by large laminated thrombus.

BERTRAM C. A. WINDLE, M.A., M.D.

357. *Chiari, on the Localisation of Angina Phlegmonosa.*—In 38 cases Chiari has paid especial attention to the localisation of the suppuration, and says as the result of his observations that: 1. Angina phlegmonosa is seldom situated in the tonsil; when it is, the abscess is small and breaks of itself or is easily opened. 2. The inflammation is generally situated to the outer side and above the tonsil in the "cavum pharyngo-maxillare," the tonsil being pushed downwards and inwards, and the anterior arch of the palate well forward into the mouth. 3. The formation of pus is generally recognised by the accompanying œdema ot the uvula and arch of the palate, sharp pains shooting towards the ear and fluctuation. All these symptoms are occasionally deceptive; in doubtful cases a small exploratory puncture may be made through the middle of the anterior arch of the palate straight backwards, and about 2 centimetres deep. 4. On proof of the presence of pus an incision with a sharp tenotomy knife or sharp-pointed Bistoury, protected by plaister, is to be made in the centre of a line drawn from the mouth to the crown of the upper wisdom tooth, without the pus points elsewhere. The incision is to be directed straight backwards parallel to the border of the anterior of the palate, and can be made from one to two centimetres deep without danger. If pus escapes from the opening this is to be enlarged downwards on drawing out the instrument. 5. If the presence of pus cannot be proved and the swelling is considerable the incision can still be made in the same way, so as at least to relieve the inflamed tissues. 6. In rare cases the pus breaks through elsewhere. It is therefore indispensable in every case to make a proper inspection of the mouth, throat, and naso pharyngeal space so far as is possible, when the focus of suppuration may often be found.

G. D'ARCY ADAMS, M.D.

358. *Thoma on a Peculiar Parasitic Organism in the Epithelial Cells of Carcinoma.*—Thoma has found in the nuclei of carcinomatous epithelial cells very numerous cell-like structures, which he looks upon as cell parasites. They are formed from protoplasms and nucleus, which nucleoli are stainable with the usual stains. Sometimes they appear in greater numbers within the nuclei, which thereby are puffed up and lose their stainability. At other times near the nuclei, in a hole in the protoplasm. Now and then they are found in the nuclei as fine granular or homogeneous, strongly refractive balls, which do not stain, and often, nuclei-like, bodies collected into masses. With respect to this, epithelial proliferation has been before described by means of similar structures

The author suggests the possibility that the forms described by him stand in some causal relation to carcinomatous formation.

VINCENT D. HARRIS M.D.

359. *Bouchard on the Role of the Local Tension in Infectious Diseases.*—Two laws are formulated by the author on this subject:—1. The capability of an infectious disease to produce severe general disease is in inverse proportion to its capability to produce a local affection. 2. The local affection produces or strengthens immunity, and lessens the severity of the general disease. As an example, anthrax in man causes only a local and slightly dangerous affection, whereas in the rabbit it causes a fatal septicæmia, without any local disease. Again, the *bacillus pyocyaneus* causes only a chronic ulcer in the guinea-pig, but fatal sepicæmia in the rabbit. Experiments have shown that vaccinated rabbits innoculated with this bacillus have only a slow ulceration, like guinea-pigs, whilst unvaccinated rabbits died of septicæmia without any local affection.

E. EDWARDES, M.D.

360. *Chiari on a Case of Universal Multiple Atheromata.*—A man, aged 74, presented such an enormous quantity of athromata to view that, on the forearm on a surface of ten square centimetres, over

twenty were counted. They were partly cutaneous, partly subcutaneous, but showed no symmetry in their arrangement. Examinations by incisions showed that they certainly developed from the sebaceous gland and hair-follicles. The author considers that even snbcutaneous atheromata-cysts are in reality retention products of the above organs.

361. *Kirchner on Extravasation into the Nerve Sheath of the Chorda-Tympani, from Diphtheria of the Tympanic Cavity.*—The derangements of taste from inflammatory processes in the tympanic cavity have already been repeatedly observed. In most cases the cause was chronic suppuration, with extensive destruction of the drum of the ear, and caries of the tympanic cavity, by which, partly in the facial, and partly in the chorda-tympani, greater or smaller alterations and destructions were caused. As an example of the pathological alteration in the chorda-tympani, I may adduce an interesting result, to which I can testify from the examination of the tympanic cavity of a child who died of diphtheria of fauces and larynx.

The case in point was that of a fresh diptheritic affection of tympanic mucous membrane in a child twenty-one months old, and, indeed, the local affection was in the tympanic cavity, which, as is well known, manifests itself in a severe form, but had not far advanced when death took place. The tympanum was preserved, as the mucous membrane of the tympanic cavity was thickened, succulent, and hyperæmic, and was covered with a yellowish red exudation, which could only be removed with difficulty. The microscopic examination of the mucous membrane of the promontories—Heigert's colouring method for fibrin and micro-organisms being used—showed that the whole texture of the mucous membrane was interwoven by an ornamental net of blue threads, which in many places were discoverable in large numbers, penetrating from the surface, and forcing apart the tissue. Besides these fibrin threads, there were also numerous cocci, occasionally in rows like the beads of a rosary, adhering to the fine fibrin threads.

Further particulars on this subject were given by one of my former pupils, S. Hirsch, with whom I made experiments respecting the diphtheritic affections of the tympanic cavity, and the employment of Heigert's method of colouring for fibrin and micro-organisms, which were published in the Zeitschrift F. Ohrenheilkunde, Bd. 19, 1888, to which are referred readers. On the tympanum the fibrin masses and cocci did not penetrate into the texture, but adhered to the surface; signs of inflammation were also visible, extensive hyperæmia, small cell infiltrations, and smaller and larger aggregation of cells. On the chorda-tympani the mucous membrane covering was much thickened, being permeated by many round cells; especially in the vicinity of the numerous vessels, the epithelium was preserved. At one spot between the epithelial layer and the sheath of the nerve there was quite a circumscribedsmall cell thickened infiltration, which showed in the middle a necrotic destruction of the cell. In the locality of this spot the fibres of the sheath of the nerve were strongly forced asunder; between them there was a fine grained mass of such size, that through it the chorda-tympani was reduced to almost one-half of its diameter. At first sight one might believe that the cause was one of a circumscribed new formation on the nerve sheath of the nature of connective tissue, which compressed the nerve in such an unusual way, but on closer examination it showed that a fine grained infiltration was there, which could be traced for some distance all round the nerve sheath. The use of Heigert's colouring method could neither prove here nor on the tympanum a penetration of fibrin threads and cocci into the covering of the mucous membrane of the chorda, or into the sheath of the same. The diphtheritic inflammation no doubt attacked the mucous membrane of the promontories after infection had taken place from the pharynx. The tympanum and chorda-tympani had already been sympathetically affected; however, the fibrin masses and cocci had not penetrated into the interior of the tissue, when on the supervention of diphtheria in the larynx death resulted.

362. *Benario on a Case of Congenital Defect of the Musculus Pectoralis Major et Minor, but with the unusual Cutaneous Development.*—The case belongs to Prof. Brirger's polytechnic. The subject of this remarkable condition was a young man, ætat. 20. No similar deformity existed in any of his relations. On the right half of his chest in front the skin lay close upon the ribs, the pectoral muscle being altogether absent. Between the chest and arm there was felt beneath the skin a peculiar membranous extension, called by the author "flughautbildung;" also "schwimmhautbildug." There was slight right convex skoliosis. The right upper limb was was shorter than its fellow (4 cm.). Electrical examination proved that the condition was congenital, and not due to juvenile atrophy (esb.) Thirty cases were found in literatura, 24 with absence of the pectoralis major, 6 with absence of the pectoralis minor and major together.

363. *Yamagiwa on the Etiology of Jacksonian Epilepsy.*—Since this form of disease was first described several conditions have been enumerated as giving rise to it, amongst others, the occurrence of parasites in the brain, to which group belong the two cases narrated in this paper. The chief points noted in the author's examination of the bodies were (1) disseminated, circumscribed groups with worm ova, and mostly with inflammatory cells in the cortical substance of the brain. (2) Localisation of these changes in the occipital, parietal, and central lobes. (3) New connective tissue formation and round-cell infiltration around the foci of disease. (4) Thickening of the vessel-walls, especially of the adventia, and obliteration of single twigs. (5) Foci of disease in the lungs, also with worm ova and inflammatory cells. As regards the nature of the mother of the ova, the author believes that they should be assigned to distomum pulmonale. His grounds for this are (*a*) Their size. (*b*) Their form, since no human brain parasite has up to the present been described which lays such ellipsoidal ova as distomum pulmonale, or D. cerebrale as this form may be called. The chief points in this case are as follow: –A. Pathological. (1) Attacks of left-sided convulsions. (Later these became general, but always commenced and were stronger on the left side.) (2) Disturbances of sight in the left eye (the right slightly shared in this); indistinct vision, &c. (3) Proportionately slight paralysis of the extremities. B. Physiologically this case is interesting in so far as it confirms the position of the centre of sight in the occipital lobes, and affords further proof for the relation between convulsions and cortical lesions. C. The occurrence of distomum as a new kind of brain parasite

is interesting, especially in a region where distomum is so common as in Japan. D. Diagnostically and prognostically: in cases where patients are affected with disease of the lungs due to distomum, the possibility should always be borne in mind that a worm or ova embolism may take place in the brain. It will also be a useful thing to examine the sputum for distomum ova, when any person in a distomum region is affected with cortical epilepsy.

364. *Silbermann on Death after Severe Skin Burns.*—The chief points to which attention is drawn in this paper are as follows:—(1) After severe skin burns there is not only an alteration in the shape of the red blood corpuscles, but also a decrease of their power of resistance against certain influences (drying, heat, compression, salt-solution, staining). (2) The red blood corpuscles altered in vital as well as morphological conditions, taken in connection with the broken-up blood corpuscles and discs, which are so numerous after burns, are the occasion of the formation of many thrombic closures of vessels and stasis in different organs, especially in the lungs, kidneys, alimentary canal, liver, brain, and subcutaneous connective tissues. (3) These vascular stoppages occur most frequently in the lungs. (4) From the numerous vascular obstructions and stasis in the twigs of the pulmonary arteries result, on the one side, a very marked difficulty for the emptying of the right ventricle and an enormous general venous stasis; and on the other side, a very distinct arterial anæmia. (5) The latter, as well as the remarkable venous stasis and the numerous thrombi, cause the hæmorrhages, abcesses, and parenchymatous changes in the organs. (6) By the above-mentioned disturbances are also explained the other morbid conditions consequent upon burns, such as dyspnœa, cyanosis, coma, small pulse, lung affections, spasms, and the remarkable lowering of the snrface temperature. (7) Death in children after no very extensive burning of the skin is due, firstly, to the more intense action of the heat upon the red blood corpuscles, consequent upon the thinness of the skin; secondly, on the smaller power of resistance of the infantile erythrocytes, and thirdly, on the small size of the heart in children which renders it but little capable of exertion.

365. *Osler on Fever of Hepatic Origin, particularly the intermittent Pyrexia associated with Gallstones.*—The author concludes that (1) in cancers and in cirrhosis of the liver a certain number of cases present fever of moderate grade, but scarcely distinctive enough to be of value in diagnosis. (2.) Chronic obstruction of the common bile-duct is often accompanied by an intermittent pyrexia, associated with a symptom-group of the greatest diagnostic importance. (3.) This pyrexia is not usually the result of suppuration, as has been supposed, but occurs with a catarrhal cholangitis. (4.) That it arises from the absorption of a ferment, produced in the ducts, is rendered highly probable by the discovery of micro-organisms both in the catarrhal and in the suppurative cholangitis. (5.) While recovery may follow, even after months or years, a fatal event is only too common. (6.) A recognition of the importance of this intermittent pyrexia and its associated symptom-group, as diagnostic of obstruction of the common-duct by gallstones, should, in the present condition of hepatic surgery, lead to more frequent operative interference in these cases.

Bacteriology.

RECENT PAPERS.

366.—Neisser, Dr.—On the Structure of Leprosy and Tubercle Bacilli, with special reference to Rosaniline and Para-rosaniline Staining Materials. (Discussion at the German Dermatological Society, 1st Congress, Prag. 1889.)

367. Spronck, Prof., Wintgens & Van Den Brink.—On the Diptheria Bacillus (Klebs-Loffler) and its Pathogenic Importance. (*Nederl. Tijdschr voor Geneeskd,* II, 22, 23, 1889, *and Deutsche Med. Zeitung,* March, 24th, 1890.)

Art. 366.—*Neisser on the Structure of Leprosy and Tubercle Bacilli.*—Unna made the statement in his work upon "Rosaniline and Para-rosaniline" that the chief difference between these dyes is shown in their different behaviour, when used in his modification of Gram's method. which consists in using a mixture of iodide of potassium and peroxide of hydrogen, in the place of iodine and iodide of potassium, that the para-rosaniline shows the' tubercle of leprosy bacilli broken up into chains of granules "coccothrix," whilst rosaniline showed them as bacilli. Neisser has shown that this conclusion is based upon wrong premises, because Unna used as rosaniline a mixture of that dye and para-rosaniline, although the para-rosaniline itself was pure. Neisser himself, using only pure dyes, has come to the following conclusions, that:—(1) All fuchsines give true "bacilli" pictures; (2) the double substitution staining products from dimethyl to hexamethyl give true "cocci" pictures; (3) the stains, red, violet, dahlia, primula, also differ in their effects—primula gives true bacilli pictures, dahlia perhaps finer and more intense cocci pictures than methyl violet; (4) another remotely related group of stains, namely, Victoria blue, methyl-green, spirit-blue, new Victoria green, resorcin violet, behave in the same way. Saffranin also, which belongs to another series, gives cocci pictures. Vincent D. Harris, M.D.

367. *Spronck, Wintgens and van den Brink on the Diphtheria Bacillus (Klebs Löffler) and its Pathogenic Importance.*—The material for examination was taken from seven patients in an epidemic occuring in the Dutch town of Horn. The membranes were taken on the 1st, 2nd, 4th (3 cases), 7th and 21st days from the beginning of the angina in the pharynx. In all the cases the bacilli were present; and pure cultivations were obtained. Whilst true diptheric-bacilli grow very slowly on Agar-Agar (their best cultivation material is ox or horse serum with this addition of Dextro-pepton-bouillon), Hoffman's Pseudo-Diptheric-Bacilli (*Deut Med. Zeit.*, 1887, p. 990), form after 24 hours voluminous cultivation masses. The formation of spores (Babes) the authors have never been able to confirm. The statements of earlier authors concerning the pathogenic significance of these bacilli was confirmed by inoculation experiments. Rabbits, in which 0·5 cm. of the bouillon-cultivation was injected subcutaneously or into the veins, all died with symptoms of paralysis. The bacilli were not found in the blood or internal organs. Their virulence was maintained through 100 cultivations. The same poisonous effect was obtained from the fluid of pure cultivations from which the bacilli had been filtered. The fluid lost its virulence on boiling. The older the cultivations the more poisonous they were. As a rule after these injections albuminuria and true nephritis was found. When a corresponding quantity was in

jected in pigeons, in small doses in 24 hours, they were apparently unaffected, but after three weeks the characteristic paralyses appeared, agreeing with those which occur after the inoculation of diptheric-bacilli in the pharynx, the paralysis gradually disappeared. The authors, therefore, conclude that the bacilli of Klebs-Löffler are the true causes of diptheria, the bacilli settle on the superficial mucous membrane and there produces a poison, which entering the blood current, provoke the well-known symptoms of the disease.

G. D'Arcy Adams, M.D.

Dermatology.

RECENT PAPERS.

368.—Hutchinson, Mr.—On Alopecia Areata, usually a Sequel of Ringworm. (*Archives of Surgery*, vol. i., No. 2.)

369.—Purdon, Dr. H. S.—On the Acne of "Doffers." (*British Journal of Dermatology*, Feb. 1890.)

370. Rothmann.—On a case of Multiple Gangrene of of the Skin. (*Deutsche Med. Zeitung*, March 24, 1890)

371 Seiler, Dr. Carl.—On the Relations between Acne and Diseases of the Nasal Cavity. (*Journ. of the Amer. Med. Assoc.*, Feb. 22, 1890.)

372. Dockrell, Dr.—On the Treatment of Urticaria Papulosa. (Lichen Urticaria, so-called).

Art. 368.—*Hutchinson on Alopecia Areata, usually a Sequel of Ringworm.*—Mr. Hutchinson draws attention to what he states is his present creed. As to alopecia areata:—I. That it is usually a sequela of ringworm. II. That he has seen it follow ringworm on the head of a calf. [*Rep.*—Since Mr. Hutchinson made this ringworm creed as to the cause of alopecia areata public, some sixteen cases at present under observation have been interrogated, with the result that in three only there was a distinct history of ringworm, at intervals of ten, twenty, and twenty-five years.

369.—*Purdon on the Acne of "Doffers."*—Purdon states this is a form of acneform eruption, occurring on the forearms and shoulders, and occasionally the face. of "Doffers," in the flax spinning mills of Belfast, being chiefly confined to the children who "doff" or remove the bobbins from the spinning frames, or clean and oil the same. The skin of the forearm is dry, and often harsh to the touch, and covered with a papulo pustular eruption. The centre of the papule in the first stage usually contains a little black speck, showing obstruction to the orifice of the gland duct. The eruption, before the stage of maturity is reached, has a shotty feel similar to what is felt in small-pox. The skin eruption seems to be in a great measure due to the oil employed—mineral oil, sperm oil. However, it is right to mention that certain kinds of flax also assist in development, especially Russian flax.

Morgan Dockrell, M.A., M.D.

370. *Rothmann on the Case of Multiple Gangrene of the Skin.*—A woman, 64, healthy, 10 years ago had a contusion of the left hip joint, leaving slightly impaired function. Circulatory and respiratory organs healthy; urine normal. In December she noticed a certain weakness of the left leg, then itching of the left leg, and the presence on it of a small red spot which gradually enlarged. Some fresh spots appeared, which, like the first, became black. Rothmann found on both legs several spots of different sizes. Their course has been somewhat various. In some circumscribed necrotic spots a demarcation line forms, the scab falls off, leaving a circumscribed ulcer with sharp edges, which heals by granulation. In others the crust dries up, leaving only a black dry spot. The whole process is not yet completed but repeats itself. Nothing abnormal is to be found in the large vessels of the lower extremities. Herr Kobner thinks that these multiple gangrenes of the skin are due to arsenical sclerosis. He communicated the following case observed by him 12 years ago. In a woman with aortic insufficiency and stenosis, and hypertrophy of the left heart, small vesicles appeared on the leg. During several days new vesicles constantly appeared, first on the leg then on the knee. Soon their base became necrotic, and in a few weeks gangrene of both legs was developed and the patient died.

G. D'Arcy Adams, M.D.

371. *Seiler on the Relation between Acne and Diseases of the Nasal Cavity.*—For several years Seiler has been in the habit of observing that acne became worse with a cold in the head, and gradually disappeared as the cold was cured. Acne punctata is almost always associated with atrophic rhinitis, while acne rosacea is almost always associated with hypertrophic rhinitis. Seiler believes that the function of the so-called erectile tissue in the nose is to act as an overflow, and so relieve the congestion in the surrounding parts. If this function of the erectile tissue is interfered with by disease, congestion of the easily dilated capillaries of the nose, face, and neck may result, and this continued congestion centering round the glandular tissue leads to acne. He believes that this glandular congestion and acne may also result in a reflex manner from nasal irritation.

James B. Ball, M.D.

372. *Dockrell on the Treatment of Urticaria Papulosa.*—During the past twelve months upwards of twenty cases of Urticaria Papulosa, in children from the ages of one to seven years, have come under observation, when the only rapid and satisfactory treatment was the following: –I. Give hot bath night and morning, washing the body thoroughly with the 5 per cent. of hydronaphthol soap. II. After bath apply an ointment of hydronaphthol from 3 to 5 per cent. III. At end of a month discontinue the ointment, but, to prevent relapse, soap should be persevered with for twelve months.

Laryngology.

RECENT PAPERS.

373. Delavan, Dr.—On Adenoid Hypertrophy at the Vault of the Pharynx. (*Jour. Amer. Med. Soc.*, March, 1890, p. 336.)

374 Brissaud, Dr. E.—On Chronic Nervous Dysphonia. (*Arch. de Laryngologie, etc.*, Feb., 1890.)

Art. 373. *Delavan on Adenoid Hypertrophy at the Vault of the Pharynx.*—The author calls attention to some points in the treatment of adenoid hypertrophy at the vault of the pharynx. This may be defined as a condition of chronic enlargement of the collection of lymphoid tissue at the vault or roof of the retronasal space, otherwise known as Luschka's tonsil. This gland is similar in structure to the other deposits of adenoid tissue which encircle the pharynx. Chronic hypertrophy may be of two varieties: in the first the adenoid element seems to predominate; the surface of the growth is irregular; it is soft to the touch, and easily broken up, and shows a tendency when torn away, to separate in largy spongy masses. In the second variety, the hypertrophied mass partakes more of the nature of a well-defined tumour, and its substance is composed largely of fibrous tissue, so that its removal is much more difficult. The location of the growth is of great practical importance, both as regards its effects and its removal. When it is large and obstructs the breathing through the nose, you find the patient presents a stupid expression, drooping eyelids, open mouth, projecting teeth,arched palate, pinched nostrils, and deformed chest, together with mental dulness, loss of hearing, and various reflex symptoms, such as headache, irritative cough, laryngeal spasm, &c. As to the treatment of these cases, in a few instances the application of resorptives and the administration of tonics may accomplish a cure, but as a rule radical measures must be employed. Sometimes the growth may be destroyed by means of caustic substances, or the galvano-cautery, but the most popular plan is to remove the whole growth by means of some surgical instrument, either by a cutting or tearing process. The author finds that he can, as a rule, remove most of these growths with Hooper's modified Soewenberg's forceps, assisted by the finger nail. The patient must be placed under an anæsthetic in most cases, but sometimes the application of cocaine is sufficient, and a good mouth-gag will be required, as well as a palate retractor. It is well to ascertain the size and nature of the growth before commencing the operation, and as there is always considerable bleeding it is better to tear away as much as possible, and to avoid cutting. Sometimes it is impossible to clear the whole mass away at one sitting, and it is well to warn the patient's friends that a second operation might be necessary, if the obstruction to the breathing be not wholly removed.

Richard Neale, M.D.

374. *Brissaud on Chronic Nervous Dysphonia.*—Dr. Brissaud has observed, among a number of persons affected with various forms of nervous maladies a certain kind of phonatory trouble, which, it appears to him, should be classed among the neuroses of the larynx. It is hardly a disease in itself, but it is closely allied to neurotic conditions, and, in the absence of other nervous symptoms, may be traced to a hereditary nervous predisposition. The persons thus affected have a hoarse, muffled voice, which is not dependent on any temporary laryngeal affection, but is their natural voice. It originates in a sort of innate constitutional weakness of the arytenoid and thyro-arytenoid muscle. The character of voice is not identical in all cases. In one case hoarseness is the chief feature, in another the muffled quality; in another, again, one remarks a eunochoid quality about the voice; and, lastly, another may have a kind of hoarse falsetto voice. Hitherto hysteria is almost the only neurosis in which phonatory troubles have been described. In hysteria the trouble especially observed is *aphonia*. There is a great difference between hysterical aphonia and the trouble here considered. The former is more or less transitory, the latter is permanent. In the hysterical affection the mechanism of the voice is profoundly affected; here, on the contrary, there is not aphonia, but *dysphonia*. There is a hoarseness, a want of clearness in the voice; there is often a heightening of the pitch of the voice, and a eunuchoid character, and this character of voice makes its appearance, about the period at which the voice breaks, after it has been of lower pitch in childhood. This nervous dysphonia, though constant so far as the spoken voice is concerned, disappears, or is much less marked in singing. This return to the natural quality of the voice in the act of singing is to be explained, Dr. Brissaud thinks, by the fact that singing is not an automatic act, like speaking, but is rather an act controlled by reason and training. There is some analogy here to stammering. Stammering is observed among persons of neurotic stock. Most stammerers can sing without exhibiting signs of their infirmity. The affection of the voice in nervous dysphonia improves also in public recitation, as in preaching a sermon. Dr. Brissaud is disposed to think that the trouble depends not on spasm, but on functional insufficience of the adductor muscles. In some of the cases a laryngoscopic examination established incomplete closure of the glottic orifice in phonation. Dr. Brissaud gives details of 12 cases of chronic nervous dysphonia, six being in males, and six in females.

James B. Ball, M.D.

Diseases of Children.

RECENT PAPERS.

375. Baginski, Dr.—On the Treatment of Infantile Cholera.

Art. 375. *Baginski on the Treatment of Infantile Cholera.*—Dr. Baginski, of Berlin, writing on this subject, suggests that as milk (which is the principal aliment of a child) is the best nourishing soil for microbes, that in some instances other aliments must be substituted for it, entirely or in part. As regards medicinal treatment, he suggests, in all light cases, mild antiseptic agents, such as calomel or small doses of vinegar. Cooling drinks, *cold* fomentations and stimulants should be used.

Francis Hawkins, M.D.

Toxicology & Medical Jurisprudence.

RECENT PAPERS.

376. Takahashi and Inoko, Profs.—On the Action of Fugu Poison (*Archiv. für exp. Path. und Pharm.*, bd. 26, h. 5-6.)

Art. 376. *Takahashi and Inoko on the Action of Fugu Poison.*—This poison is derived from a Japanese fish called fugu (tetrodon). The results are summed up as follows:—1. The respiration is lowered (dogs, cats, rabbits, rats, also frogs were experimented on), its arrest occurs without convulsions. 2. The heart in mammals is not directly affected, it is the *ultimum moriens*. 3. The pulse is gradually slowed. 4. The blood pressure sinks. 5. The vasomotor centre is paralysed, but not the peripheral vasomotor nerves. 6. The inhibitory action of the vagus is lowered and finally abolished. 7. The respiratory centre is paralysed, and convulsions cannot any longer be initiated. 8. The excitability of the motor peripheral nerve-twigs is lowered in mammals and lost in frogs. 9. The spinal cord is paralysed in frogs. 10. The cause of death is evidently paralysis of the respiratory and vascular nerve-centres. In its action on the motor nerves, fugu poison resembles curare, but differs by its paralysing action on various (medulla) centres. Medicine is powerless in severe poisoning. Artificial respiration and faradization of the phrenic are indicated. In a second article in the same number of the periodical cited, the results of a chemical examination of the poison are given :—1. Fugu poison is contained in the living fish, and is not a product of decomposition. 2. It is easily soluble in water, partially so in dilute alcohol, only very slightly so in absolute alcohol, not at all in ether, chloroform, petroleum-ether, and amyl-alcohol. 3. It is not precipitated by acetate of lead, nor by alkaloid tests. 4. It is capable of diffusion, and is not destroyed by boiling for a short time. From these results the authors gather that fugu poison is neither a ferment nor an albuminoid, though it is an organic basic body.

E. J. Edwardes, M.D.

Ophthalmology.

RECENT PAPERS.

377. Galezowski, Dr.—On Ocular Complications of Influenza. (*Rec. D'Ophtalmologie*, Feb. 1890.)

378. Swanzy, Mr.—On a Series of One Hundred Cataract Extractions. (*Lancet*, 19th April, 1890.)

379. Stephenson Sydney, M.B.—On the New Isolation Schools at Hanwell. (*Lancet*, April 5, 1890.)

Art. 377. *Galezowski on Ocular Complications of Influenza.*—The recent epidemic of influenza has presented such different features in different countries that we should not be surprised to find that other observers have had experiences of ocular complications differing much from those described by the author, which are confined to the conjunctiva and cornea, these, however, were almost always accompanied by severe neuralgic pain, generally confined to one side of the head, but affecting all the branches of the fifth nerve. Conjunctival affections. The most common complication is, for the patient at the commencement of the disease, to be attacked by pain at the side of one eye, the lids close involuntary, especially towards evening, as if the patient were sleepy, and they feel heavy and painful at times during the day, in the morning the eyelids are glued together, without there being much redness or secretion. There is some distension of the vessels of the sclerotic which easily causes a suspicion of commencing iritis, the pupil, however, is always found to act perfectly. Lacrymation and photophobia are frequently present, and the patient finds it difficult to fix his eyes long upon an object. The author attributes these symptoms to a neurosis of the branches of the fifth nerve. The conjunctivitis cannot be considered to be a serious complication and it is very amenable to treatment, yielding best to large doses of hydro-bromate or sulphate of quinine. Corneal affections : These assume the form of a herpetic keratitis. It occurs at all stages of the disease, but the author has seen it most frequently during convalescence, and sometimes after all other symptoms of influenza have passed off. There is at first great photophobia, so that even the unaffected eye is only opened with great difficulty, this lasts three or four days, and it is then followed by complete anæsthesia of the cornea, the lacrymation, however, continues, and it is accompanied by intense injection of the whole conjunctiva. The cornea becomes hazy, the turbidity being superficial, and on the focal illumination a large superficial ulcer can often be seen, triangular in shape, reaching from the margin of the cornea to its centre. This area is completely anæsthetic, but the adjacent cornea is hyperæsthetic. This anæsthetic ulceration the author considers pathognomonic of influenza, the ulceration tends to increase in area but not in depth. As regards treatment, the author relies on quinine and antipyrine for the general condition. Locally, ordinary astringent collyria suffice as long as the conjunctiva only is affected, when anæsthesia, with desquamation of the epithelium is present he uses eserine and cocaine alternately. When the sensibility of the non-ulcerated part of corea has been lessened the yellow oxide of mercury ointment is introduced twice a day. Warm fermentations are useful throughout.

W. Adams Frost.

378. *Swanzy on a Series of One Hundred Cataract Extractions.*—Mr. Swanzy in a paper on this subject read before the Surgical Section of the Royal Academy of Medicine of Ireland, described his mode of performing the operation. He urges that quite a narrow coloboma was required to efficiently protect the eye against the danger of secondary prolapse of the iris in the course of the healing—a danger to which eyes operated on by the simple method were so liable, as it provided a gateway by which the aqueous humour contained in the posterior chamber might escape through the wound, without carrying with it a portion of iris. Mr. Swanzy considers that such an irridectomy is no "mutilation of the iris," but rather a measure which rests upon a sound scientific basis, and which is calculated to protect the eye against a serious danger. After the lens is delivered he strongly recommends searching the wound carefully with an iris forceps for any tag of capsule which may have prolapsed into it, and if any be found it is to be drawn gently forwards and snipped off with the scissors. The patient's face is bathed with hot water and soap, and the conjunctival sac is washed out with a 1 in 5,000 solution of sublimate lotion just before the operation, and the same lotion is used all through. Small bits of lint boiled in the sublimate solution and stored in it are used in place of sponges. The solutions of eserine, cocaine, and atropine are all made with sublimate lotion of the same strength (1 in 5,000.) The dressing consists in a layer of lint previously boiled in sublimate lotion, and wet with it; over this is placed some absorbent wool similarly boiled and wet, then a layer of oiled silk protective, and then the bandage. This is not disturbed for 48 hours. He stated that the cases were not selected, but related to all those in which he had operated to the end of 1888. His classification of results was in accordance with the handy conventional method of recording them as adopted by Professor Knapp and others—viz.: "no improvement," 2; "moderate," 5; and "good," 93 per cent. As to Mr. Fitzgerald's operation being, or having been, identical with his own, perhaps it was so far as the position of the incision in the margin of the cornea went; but he was not quite sure that it was in respect of the minute coloboma, or the particular care taken in respect of the capsule, which he regarded as a vital matter.

379. *Stephenson on the New Isolation Schools at Hanwell.*—This paper gives particulars of the new isolation school erected by the managers of the Central London District Schools at Hanwell.

Opthalmia, it appears, has never been absent from that institution since its foundation. Special reports have been made from time to time during the last twenty years, most of them strongly condemnatory of the buildings. Mr. Nettleship, who inspected the place in 1874, and again in 1888, gave as his opinion that "the present system may be shortly described as an arrangement for favouring the production and spread of the disease, and then keeping it in check by unceasing, laborious, and expensive medical treatment." In June, 1889, the managers determined to erect, at a cost of £30,000, the new isolation school. The architect adopted the pavilion system, and has laid out a series of one-story blocks of galvanized iron lined with wood, surrounded by a clear space, 150 feet wide, paved with asphalte. Fifteen wards have been provided, capable of affording accommodation for 400 children. A special feature—novel, at any rate, in England—is the raising of the floors by brick piers some two or three feet above the ground, which in turn is covered with a six-inch layer of concrete. There is cross-ventilation. Heating is effected by hot-air pipes in the absence of open fireplaces. Each ward has a bath room, water closet, lavatory, linen closet, and nurse's room.

Washing arrangements are carried out on the "jet" system, by which each child washes in a separate stream of water as it issues from a pipe. The waste water falls on slate slabs, and is conducted through glazed earthenware channels into the open air. Bathing is effected exclusively by means of spray baths. "These contrivances consist of an iron service pipe having seven perforated nozzles enclosed in a slate case with a glass door. The bath is 2 ft. 2 in. wide, the same in depth, and 5 ft. 6 in. high. Directly the child steps inside, the valves which admit the water through the nozzles are opened by the child's weight pressing on a spring, and the jets diffuse a fine spray over the body." In this way it becomes impossible for two children to use the same water—obviously a precaution of importance in dealing with opthalmia. Moreover, the following statement will show that a great saving of water is effected. "It has been calculated that fifteen quarts of water are sufficient for a spray bath, whereas for a common bath 180 quarts are required."

Further arrangements include a large central kitchen, fitted with modern appliances; three dining halls, each 80 ft. long by 20 ft. wide; three schoolrooms, with a minimum allowance of 12 superficial feet per child; and an administrative block, with the usual quarters for medical officer, matron, and nurses. Water is supplied by the school well. The report is accompanied with a plan, which shows that a separate system of drainage, surface, and sewage has been provided, with flushing tanks at the heads of main drains. Clothes are first treated in a steam disinfector, and then washed in the general laundry.

The etiology of opthalmia in many points is still obscure. Authorities, however, seem to agree that isolation, thorough and prolonged, is a *sine qua non* in the successful treatment of an epidemic. From the foregoing sketch it will be seen that such physical isolation will be for all practical purposes complete at the Hanwell Schools. Moreover, and this is a point of some importance, the course of education will not be interfered with. In the past too much reliance has been placed in makeshift isolation and imperfect nursing, but managers of schools are now awaking to the absolute necessity of stronger measures. For the last twenty-two years the medical officers at Hanwell have been unable to cope with the disease owing to the structural defects of the buildings. It may be confidently hoped that the present public spirited action marks a new departure in the treatment of that historic scourge, opthalmia in schools. Meanwhile, during the next few years, much interest will be attached to the issue of this combined system of schooling, isolation, and medical treatment.

DAVID WALSH.

Reviews.

ARTICLE 380.

Asthma, considered specially in relvtion to Nasal Disease. By E. SCHMIEGELOW, M.D. (Consulting Phys. in Laryngol. Univ. Hosp., and Director of the Laryngol. Depart. in the Polychinic at Copenhagen). London: H. K. Lewis, 1890, pp. 90.

THE author begins with a very good historical account of asthma in general,ealarging upon those authors who tried asthma, rather certain forms of it, as a nasal reflex affection. The variogs theories on the subject are given, and Lee's (1865) are regarded as the most plausible, viz., that idiopathic nervous asthma is a nausosis in the modulla oblongata, caused by an irritation especially of the pummogastric nerves, and always concludeu by a tetaniform contraction of the diaphragm. Schmidtborn's theory (Ueber asthma nervosance Volkmann's Ktm. Vostr., No. 328, 1889), viz., that asthma is a reflex spasm of the action of the lungs, a theory supported by the fact, that nitrite of amyl acts beneficially, is rather hastily pronounced "very uncertain and hypothetic." In this work only nasal reflex asthma is considered, a form first distinctly depicted by Voltolini. The author next gives a tabular account of 71 cases of asthma in connestion with nasal polypus. Altogether, of 139 patients with nasal polypus, about 22 per cent. of 414 patients with chronic rhinitis, about 8 per cent. had asthma as well. The results of the radical treatment adopted by the author are certainly very gratifying, although in a short concluding chapter on Treatment we are told that "it is a great mistake to begin a local treatment of the nose in those cases where the clinical picture gives no decided support to the belief in a causal connection between the nasal disease and the asthmatic attacks." Asthma is a bulbar neurosis, and nasal disease may cause asthma if this neurosis also exist, not otherwise. This work is translated into good English, and the cases given deserve careful study by all who are interested in the relationship between asthma and nasal diseases.

E. J. EDWARDES, M.D.

Notes on Books.

ARTICLE 381.

Uterus und Auge. By Dr. Salo Conn, with a Preface by Dr. Ernest Pfliiger, 1890.

THE scope of this monograph is well expressed by the following words, which form part of its title—an exposition of the functions and diseases of the female sexual system, with reference to their pathological influence on the visual organs." The influence of the sexual system in causing ocular symptoms has often been considered in short papers by different authors, we believe, however, that this is the first serious attempt to arrange the evidence that exists on the subject into something like systematic order. The author appears to have spared no pains to ascertain what has already been written on the subject. He gives a list of 219 papers, and refers in the text to no fewer than 358 different authors. The work is therefore essentially a compilation, and although it will prove invaluable to future workers in the same subject, one cannot but feel that some of the evidence is very untrustworthy, and that many of the conditions that have been attributed to morbid conditions of the generative organs may easily have been really dependent upon other causes. This is especially the case with the affections attributed to disordered menstruation, and with whose advent has been thought to have been produced (or at any rate the date of their onset determined) by normal menstruation. Many of these affections are so common, and occur so frequently in the male, that it is impossible to avoid the suspicion that their concurrence with menstruation was only a coincidence. An interesting case, however, is referred to as having been recorded by H. Cohn in which proptosis, goitre, and papitation occurred at every menstrual period, the symptoms entirely disappearing in the intervals. The disordered conditions of menstruation are divided into those occurring at puberty and at the climateric. Among the ocular conditions attributed to the former are keratitis, disseminated choroiditis papillitis, optic atrophy, retrobulbar-neuritis, hæmorrhage into the vitreous, contraction of the visual field. It is of course impossible to examine here the evidence on which these conclusions are based, but full references are given. We are surprised that more is not made of ocular conditions induced by, or coincident with, the cessation of menstruation, hæmorrhage into the vitreous, increase of pre-existing myopia, with opacities in the viteous, and irido-choroi itris, it seems to us, are much more common in women at this period than among men. Relapsing cyclitis also, we should have thought, was worth more than a single reference to a case of Middlemore. Dysmenorrhœa from general causes as chlorosis is fully dealt with. The curiosity of blue discolouration of the eyelids (chromhidrosis) that has very rarely been met with in anæmic and chlorotic girls is very fully considered. Many of these cases have been proved to be fraudulent, the symptom being produced by artificial colouring agents. The question of so-called reflex amblyopia in dysmenorrhœa, and the effect of masturbation in producing ocular symptoms are fully dealt with, but we have no space to criticise the author's conclusions. The same may be said of the section devoted to Basedow's disease. The pages devoted to eye-symptoms in hysteria and hystero-epilepsy will repay perusal. Amongst the ocular conditions due to pregnancy that associated with albuminuria is the most important, the author's conclusions with regard to this are those which we believe are now generally held, namely, that the prognosis as regards vision and the disappearance of the retinal changes is relatively good in the first attack. That subsequent pregnancies are likely to be followed by a recurrence of the symptoms, and that the prognosis is then much less favourable, therefore the danger of subsequent impregnation should be pointed out. It seems that in this condition a great loss of blood during labour has an especially unfavourable effeet upon the retina. The section on uræmic amaurosis is very good, it is pointed out that although there may be absolute blindness the pupils may still react to light, and when this is so the prognosis as regards vision is relatively favourable. Among the lesions considered in connection with the puerperal state is embolism of the arteria centralis retinæ, which in this condition may occur independently of any cardiac lesion. Mauthner's suggestion is adopted that many cases of transitory blindness that have been recorded in this state have been due to an embolus which has first lodged at the point where the central artery has been given off, and has then been carried along the larger vessel. The subject of puerperal septic panophthalmitis is fully dealt with. This condition appears to have been first described by Tennon in 1774, but Virchow was the first to point out that it was due to a sceptic embolism. The prognosis as regards the affected eye is, of course, absolutely unfavourable, and the immense majority of cases have been followed by the death of the patient.

Article 382.

Commission of the New York Neurological Society.—Report on the Treatment of Epilepsy and Chorea by the Correction of Ocular Defects. (*Journal of Nervous and Mental Diseases.* Nov., 1889.)

We do not propose to review in this report in any detail, but as we have published abstracts of many of Dr. Stevens's papers, without, however, endorsing his conclusions, we feel bound to point out that those conclusions have not been verified by a tribunal which we consider to be impartial, although Dr. Stevens does not. Dr. Stevens's main conclusion was that many cases of epilepsy and chorea were due to eye-strain, some to errors of refraction, but most to abnormalities in the relative power of the ocular muscles, which produce a tendency to deviation in different directions, conditions for which suggested new names as exophoria, hyperphoria, &c. It was claimed that these conditions could be remedied by "graduated tenotomies," and the epilepsy or chorea thus cured in some cases. This report is unfavourable with regard to both contentions.

W. Adams Frost.

Article 383.

The *American Journal of the Medical Sciences* for March contains the account of a very rare form of injury, sustained by a railway conductor, who was precipitated, back downward, in front of a train, his head falling between two tiers, while the break beam caught his body, pushing it towards his head, and turned him a complete summersault, leaving him lying on his face. As a result of the accident, power of turning the head was lost, the front of the neck was unduly prominent, and paralysis of the upper extremities continued for some time. Dislocation of the neck having been diagnosed, reduction was effected by extension and counter extension, and a plaster of paris splint applied to the head, neck, and shoulders, which, after two weeks, was replaced by an apparatus of leather. More than three months after the date of the injury the neck presented the appearance of a 'bent knitting-needle which has been strightened,' assumed by Dr. A. W. Acheson, who reports the case, to be due to uncorrected displacement of one of the cervical vertebræ, or to fracture of one of those bones immediately posterior to its body. In the same number of the *Journal* Dr. Duhring advances arguments in favour of including the skin affections described as impetigo herpetiformis by Hebra and Kaposi under the term dermatitis herpetiformis in his own classification; and Professor Glasgow, of St. Louis, contributes a long and interesting account of an unusual form of septic lung disease observed in the Mississippi Valley during the years 1866 to 1890. The number is further enriched by papers from the pens of Dr. David Page, of the Local Government Board in London, on the "The Relations of Underground Air and Water to Public Health Questions"; and by Dr. A. E. Sansom, of London, on "Mitral Stenosis in Children."

ARTICLE 384.

Edinburgh Medical Journal.

THE March issue of this venerable publication presents many features of interest, among which an illustrated article, by Mr. F. M. Caird, on "The Treatment of Gangrenous Bowel in Strangulated Hernia," deserves careful perusal. After mentioning the various modes of treating the injured bowel when exposed after division of the stricture, viz., return of the part to the peritoneal cavity, formation of artificial arms, and resection of the gangrenous gut, Mr. Caird proceeds to support yet another mode of procedure, which he considers might be found of exceptional service under certain conditions. He proposes, in place of resection or the formation of an artificial arm, to close the rupture in the tube, or prevent its occurrence by inverting the dead or dying tissue, and suturing the sound wall of the bowel over its stricture, as a consequence of this treatment, need only be considered, he thinks, in cases which involve a *ring* of damaged tissue, but he leaves the extent to which the interference may with safety be diminished for further experience to teach. In the same number of the *Journal* Dr. Clouston continues his valuable essay on "Diseased Cravings and Paralyzed Control," in respect to morphinomania, chloralism, and cocainism, the account which he gives of this last habit possessing particular interest. The effects of the drug are described as being of the most powerful kind, it being the most absolute destroyer of the moral sense generally that we yet know. It is satisfactory to learn, however, on the high authority of the author in question, that, "looking at cocainism generally, and comparing the effects of cocaine on the higher functions of the brain with those of alcohol, opium, and chloral, one sees that they are more distinctly in the direction of intellectual perversion, of technical insanity, in fact, while they last, but that they are less enduringly hurtful and sooner recovered from than any of the other drugs, except, perhaps, chloral." "Cases of Variotomy," by Mr. Skene Keith; "The Prevention of Epidemic Disease," by Dr. F. P. Atkinson; and a translation of Dr. Brocq's article on "Cutaneous Eruptions," by Dr. W. A. Jamieson, are among the other articles which go to make up the number.

ARTICLE 385.

Transactions of the Obstetrical Society of London.

THE fourth part of the thirty-first volume of the Obstetrical Transactions contains a very careful account of the anatomy of the pelvic floor, and of the changes in this region which accompany the slighter degrees of prolapse, in which the author, Dr. Herman, summarises the results of a very extended series of observations and measurements carried out for the purpose of the paper. Dr. Adolph Rosch reports an instructive example of that rare occurrence, chylous cyst of the mesentery, which, before operation, was taken to be parovarian in origin. The apparent cyst proved to be formed by the layers of the mesentery between which six pints of milk-like fluid had collected, and which was removed through a tocar. The nature of the structure being thus made clear, the cavity was sponged clean, and the opening into it stretched to the abdominal wound, which was partially closed by sutures and dressed. The patient made a good recovery. An illustrated article, by Mr. Alban Doran, on closure of the ostium in inflammation and allied diseases of the falloprian tube, which is printed in abstract, constitutes an important contribution to the pathology of a subject that is by no means generally understood, and it will probably be the means of inciting others to conduct investigations in connection with the class of lesions treated in it. Other papers printed in this part of the *Transactions* include a case of inversio uteri, by Dr. Braxton Hicks; hæmatemesis in a new-born infant, by Mr. Hodges; ovarian tumours (illustrated), by Mr. Bland Sutton; a case of vesico-utero-vaginal futula, by Dr. C. J. Cullingworth; and several communications of general obstetrical and gynecological interest.

ARTICLE 386.

Archives of Pediatrics.

IN the March number of the Journal devoted to the diseases of children, which is published in America, there is an interesting paper on "Aneurism in Early Life," contributed by Dr. A. Jacobi, of New York, to the *Transactions* of the American Pediatric Society. The patient, who was only five years old, had been operated on, with apparent success, for disease of the hip, of tubercular origin, her family history being of a distinctly phthisical character. Progessive recovery went on for nearly three months after the operation, but at this time a severe colicky pain in the epregastrum was experienced, and convulsions ensuing three days later, were repeated at intervals up to death, five days after the first onset of the painful attacks. During life an obscure intumescence could be defined on deep palpation over the site of the pain, and on post-mortem this swelling was found to be aneurysmal and involving the abdominal aorta. Though clearly originating in tubercular deposit, no sufficient explanation of its occurrence in this site, so far removed from the centre of mischief in the hip, was forthcoming; but the history is an instructive addition to the scanty record at present accumulated respecting aneurism among the very young.

ARTICLE 387.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army—Authors and Subjects.

Vol. x. Washington: Government Printing Office. 1889.

THE great undertaking begun by Dr. Billings in 1876 has made steady progress, and has now advanced so far that its latest addition favours the expectation that we may at a not very distant date have the pleasure of congratulating the compiler on the completion of his gigantic task. The tenth volume, like its predecessors, shows the great care and ability with which a carefully considered, yet daring, scheme has been carried out. This volume contains 7,658 author titles, representing 2,905 volumes, and 7,282 pamphlets, and also includes 14,265 subject titles of separate books and pamphlets, and 29,421 titles of articles in periodicals. In looking over the well-printed pages of this ably-arranged catalogue, one cannot help feeling some regret that the labour and mental energy involved in the preparation of such a work are so much out of proportion to its direct and practical value. The work, we imagine, is not likely to be in any great demand, and whilst so much of its contents refers to literature that is now useless and obsolete, the almost daily additions to medical and surgical science renders even the most recent volume more or less incomplete.

ARTICLE 388.

The Immediate and General Treatment of Accidents and Injuries. By Sir WILLIAM MOORE, K.C.I.E., Q.H.P. Late Surgeon-General with the Government of Bombay. Published under the authority of the Government of Bombay. London: J. & A. Churchill. Calcutta: Thacker, Spink & Co. Bombay: Thacker, Vining & Co. 1889.

THIS small work, published for use in India, and for translation into the vernacular, is a very creditable addition to what may be called "first-aid" literature, and in its English form seems well adapted for the use of our countrymen, both at home and abroad. A brief section on the general principles of the immediate treatment of urgent traumatic and morbid conditions, is followed by brief sections on each of the subjects, arranged in alphabetical order. The articles are clearly written, and deal correctly and quite as fully as can be expected with all essential points of practice. The work is a thoroughly practical one, and beyond a brief review of the course of the blood vessels, no reference is made to anatomical and physiological facts.

ARTICLE 389.

THE reprint of Dr. R. W. Taylor's contribution to the *New York Med. Journal* on the subject of "Chronic Inflammation, Infiltration and Ulceration of the Extreme Genitals of women," is illustrated by one full-page chromo-lithograph and 27 engravings, so that if the text is not explicit it is no fault of the author's. As early as 1870 he perceived that the views entertained by the profession with regard to the pathology of hypertrophia and ulcerative lesion of the vulva were "all wrong," and he therefore set to work to study the the subject *de novo*, as a result of which he formulated certain definite conclusions. These he supports by notes of selected cases which constitute the bulk of the text.

Miscellany.

NEW DISEASES.—The discovery of so-called "new diseases" is one of the necessary consequences of increasing research and improvements in the methods of diagnosis; and within the last few years there have been added to our nosology not a few names synonymous with affections which had either not previously been recognized as distinct affections, or had been but imperfectly understood. Indeed, it is one of the most encouraging indications of progress in knowledge that we are becoming more and more fully capable of classifying symptoms in relation to pathology, and it needs only the briefest survey of the recent history of medicine and surgery to prove at once how magnificent an advance in this direction has been accomplished by the school of modern explorers in the field. The investigations of Charcot have done very much to extend the limits of our information in regard to diseases of the nervous system, and his labours have been ably seconded by many who have derived the best inspiration from his example and suggestion. It is also, perhaps, more especially in connection with diseases of the nervous system that the labours of modern investigators in the realms of pathology will bear fruit in the immediate future; and this, by enabling us to associate with demonstrable tissue changes, many of the obscure functional disturbances that are at present so baffling in the intensity they exhibit in the absence of apparently adequate causes for their occurrence. "New diseases," so called, are described with a frequency which is the natural outcome of the extended research of observation to which allusion has above been made, and one of these presents several features that serve to render it a peculiarly interesting study to neurologists. This has been termed by Dr. Bloeg, to whom we owe its description, *abasie-astasie*; and a further account, based on examination of a second example of the disease, is given in the *Archives de Neurologié*, by Dr. Ladame, of Geneva. The patient who formed the subject of this description, was 54 years old, and had passed a great portion of his life travelling in the Cordilleras and on the Amazon, exposed to privations of every description and sudden changes of climate of the worst extreme degree. Often insufficiently fed and exposed to the air at night, he had been a sufferer on various occasions from malarial feverrs, which brought him to the verge of death. Twice he was stricken down by yellow fever, and once by dysentery. Twenty-four years before coming under observation in 1889, he had been suddenly seized with vertigo, attended with acute pain, pallor of the face, faintness, and a feeling as of approaching death; and a few days later, while rapidly marching, the same symptoms returned. He fell to the ground, and was completely unable to raise himself, feeling as though paralyzed, the hands being afflicted with a nervous twitching. Stimulated by the desire to escape from the dangers of being lost and deserted, renewed efforts to move were made, and at length successfully—a long march of several days, often along trackless paths, being subsequently accomplished. During the attacks, which recurred at intervals through successive years, consciousness was preserved, and by-and-bye a condition was entered on which rendered normal walking an impossible achievement. In this advanced stage of the disease no trace of paralysis can be perceived, nor any symptom of loco-motor ataxy; indeed, all the movements of the limbs, save alone those producing normal walking, can be easily and immediately called forth by the will, such as leaping, running on all fours, mounting a carriage, swimming, acting, &c. These characteristics of the disease are mainly those which have been dwelt upon by previous observers, but the particular case described in detail by Dr. Ladame presented numerous features, in which it showed a deviation from the typical disease, divided by Charcot into paralytic and atreic abasie, the latter form being further arranged under the heads of trepidant and chorerform attacks. In Dr. Ladame's opinion, the disease in its various aspects should be regarded as one of the protean manifestations of hysteria, and not as having its origin in an organic affection of the nervous system; but this explanation, unfortunately, offers very little that is tangible or satisfactory to account for the very marked manifestations of disturbance exhibited by the limited number of cases of the disease as yet examined. It is by no means improbable that, the attention of physicians being now drawn to the features of the affection, its occurrence may be more frequently noticed; for we have abundant illustrations in the history of such diseases as Landry's paralysis, mycœdema, Paget's disease of the nipple, &c., to the effect that so-called rare diseases are oftentimes rare chiefly because the power of describing them in relative terms is wanting to the general practitioner who sees them for the first time in his experience. When once, however, he has been taught by the descriptions of others to recognize the assemblage of symptoms, he readily enough succeeds in associating them when encountered.

Removal of the Appendix for Recurring Appendicitis.—The very considerable dangers attending the existence of abnormal conditions of the appendix vermiformis, and the not infrequent fatal consequences resulting therefrom have latterly given rise to a feeling that some radical treatment of the affection by surgical means is desirable before the worst development have ensued. In this country Mr. Treves has given a special prominence to the subject, and in his account of an operation for removal of the appendix published in 1888, drew attention to the advantages derivable from interference prior to the occurence of absolute necessity as indicated by symptoms pointing to dangerous complications. And in America, Dr. Senn, of Chicago, is also an advocate of the proceeding, and has recorded a case in which he successfully adopted it. In a recent number of the *New York Medical Record*, Professor B. E. Hadra, of Texas, describes another example of the same kind, uses it as a test on which to urge the advisability of more frequently resorting to surgical means of relief in suitable cases. His patient was a baker, fifty-two years old, who, during the six months preceding operation had been subject to attacks of colic and constipation, arising without obvious cause, and which were readily relieved by enemata and opiates. On examination six weeks before operation, there was a sensation of resistance on the region of the cœcum, but no distinct tumour could be discovered; later on, however, a tender spot, two inches inside of the anterior superior spine of the ilium could be detected, and the patient himself insisted that this was the site of his pain at every attack. A crescentic incision, the convexity to the right was made over the cæcum, the centre of the line being at the tender spot in question, and on opening the healthy peritoneum the top of the appendix was at once seen, the body being free, about two inches long, and the thickness of a pencil. Its position was abnormal, in front of and nearly across the end of the cæcum, and its site exactly corresponding to the seat of pain; it was therefore tied close to its cæcal end and cut away, the stump dressed with iodoform, and closed by three Lembert sutures. Four months after the operation there had been no return of either pain or tenderness. Microscopical examination of the removed organ showed it to have been the seat of chronic catarrhal appendicites of a mild form, the serous investment also showing signs of irritation. It is suggested by Dr. Habra, that in this case the pain was possibly caused by the twisting of the appendix in its abnormal position, occurring temporarily, and setting up some disturbance in the circulation through the part. The principal interest attaching to it, however, is in the evidence it affords of the slight changes which may be the first causes of inflammatory conditions which, by their constant repetition, may ultimately result in the production of the most serious and ever fatal consequences. It lends support also to the claim that the safest course to pursue in cases of recurrent appendicitis is to remove an organ which is of no practical value of the economy as soon as it is demonstrated to have become an increasing source of danger to it, and in the light of the information afforded by the cases already recorded, in which this has been successfully accomplished, there appears to be much to recommend it.

The Cause of Hydrophobia and its Cure.—An extremely lucid and comprehensive little pamphlet on the cause of rabies and its prevention by muzzling, has been issued by the Society for the Prevention of Hydrophobia, the author of the brochure being the Hon. Secretary of the Society, Mr. Frank Kerslake. The object of the publication is, of course, to encourage the growth of opinion in favour of legislation in the direction of a general muzzling order throughout the country, the argument used being, that inasmuch as rabies is invariably communicated by inoculation, its spontaneous origin, though once commonly received, being now devised by every competent authority, it can only be permanently eradicated by the adoption of a method of prevention, which will effectually prevent such communication for a sufficient length of time. That the adoption of a general muzzling order may be trusted to have this effect has been clearly demonstrated by the success attending its introduction into Vienna where, for six months after a period of one and a half years, during which all dogs had been muzzled in the public thoroughfares, only one case of rabies occurred. Mr. Kerslake effectually disposes of the objection, which has been raised in this connection, to the effect that this immunity was due not so much to muzzling as to the system of registration of dogs adopted in the city, the account he gives of the experience of the Swedish authorities in dealing with the scourge affording the most conclusive evidence that could be given to this end. The immunity from hydrophobia engaged by those countries into which the importation of dogs is prohibited by the State is also a very cogent argument in favour of the theory that the disease is one that cannot arise except as the result of inoculation through the bite of an already infected animal. The sentimental objection raised to muzzling are reviewed by Mr. Kerslake in his paper in a very impartial spirit, and the unsoundness of the conclusions arrived at by their supporters exposed freely and without bitterness, while the overwhelming scientific and other testimony he is able to produce in support of the need and humanity of stringent refutations as to the muzzling of dogs, if we would accomplish the much-desired extinction of rabies in this country can scarcely fail to convince anyone of reasonable capacity how great would be the national gain from such a measure of precaution.

Sulphur Locally in Diphtheria.—Writing to the *Medical News* on the treatment of diphtheria, Dr. F. N. Drake reports good results from the employment of sulphur in this connection, when the disease is situated above the larynx. He recommends that the diphtheritic membrane should not be removed, but having been first irrigated with a disinfectant in solution, it should be treated to a coating of washed sulphur, best applied with the aid of a camel hair brush. Three to five such applications in the twenty-four hours are sufficient, and patients old enough to describe their sensations declare that they obtain considerable relief from the treatment, which is efficacious probably by the setting free of sulphurous acid as a result of combination of sulphur with oxygen under the conditions of warmth and moisture present. Calomel is also spoken of well by Dr. Drake when similarly utilised; but the more dangerous nature of this remedy necessitates special precautions in dealing with it, the quantity applied each time being accurately measured. In making the applications, it is necessary to observe the hours immediately after meals, except in the case of the nasal passages, in order that the medicament may remain as long as possible in the meshes of the membrane.

Medicine in Japan.—The speed with which the scientific study of medicine is advancing in Japan has several times of late been shown by the eagerness with which the inhabitants of this distant State have availed themselves of the most recent results of western improvement in science and practice. That the spirit thus exhibited has an active and vigorous life, is shown too by the regular issue of periodical publications of a medical character, one of the oldest of which, the *Sei-I-Kwai Medical Journal*, completed its eighth volume of monthly parts at the end of 1889. Amongst the English printed communications in this number is one from Dr. G. Minami, of the Fukushima Hospital, on a case of calculous expectoration occurring in a native, aged 26 years. The patient came under treatment on account of a pustular eruption of irritable character, but the principle feature of the case was associated with a cough from which he suffered while in the hospital, the expectoration attendant on which included large numbers of coarse calcareous particles about the size of rice grains, and consisting of carbonate and phosphate of lime. Examination for tubercle bacilli in these masses gave only negative results, and there was no serious abnormal condition of the lungs discoverable. The man grew better under treatment, and left the hospital.

The Fecundity of Marriages in France.—The serious depreciation in the population in France places a premium upon those good patriots who help to counteract the evil by having a serviceable number of offspring. It appears that a new law is about to be framed, giving certain advantages to parents having more than seven children. With this object in view some statistics have just been published, showing the prevalent condition of fecundity which obtains from marriages in France. To begin with, there are two millions of married persons who have no children at all; of those having one child, there are two millions and a half; of those with two children, two millions three hundred thousand; of those with three, about one million and a half; of those with four, about one million; of those with five, five hundred and thirty thousand; of those with six, three hundred and fifty thousand; lastly, of those who have seven or more, two hundred thousand. These statistics place the matter upon a practical basis. The French Government will be able to compare results after some years, provided the new scheme of conferring concessions upon useful sires and dames ever comes into operation. It is not stated, by the way, what the concessions are to be.

A Novel Endoscope.—Dr. F. Henel, jun., of New York, describes in the *New York Medical Journal* of Feb. 22nd, a very simple form of endoscope, which he asserts is also very efficient. It consists of a truncated cone of metal or vulcanite, the narrow end of which is passed into the urethra until the meatus is plugged by it. The broad end of the cone is oblique and closed by a glass lens. By means of a rubber ball and tube, air can be forced into the speculum, and through it into the urethra. Dr. Henel states that when the urethra is thus distended with air a great length of the urethra is exposed to view, and can be accurately examined.

Dr. Goode, of Orange, New South Wales, who was defendant in the recent slander action, Davis *v.* Goode, and against whom a verdict of £200 damages was returned, was on December 28th arrested by the Sheriff's officer for neglecting to pay the costs of the action, which amount to over £1,000 and transferred to Bathurst Gaol. His reason for not paying the amount is that he would be thereby admitting the justness of the jury's verdict, and as his conscience tells him he was right in the course of action he took against the hospital matron, he is determined not to pay a penny, but remain in gaol for his full term. A good deal of sympathy is now expressed for him, even by his opponents, who never expected that he would be punished in such an extreme manner.

In *The Practitioner*, (Feb. 1890, p. 95), Prof. Burdon Sanderson writes that he has returned from Egypt, and gives his impressions on the advantages and drawbacks of a journey to Egypt as an aid to convalescence. For those who are free from organic disease, and only want recuperation, Egypt produces too great an indisposition for bodily exercise, and the opportunities for locomotion are so limited that one cannot make short excursions, and unless one is strong enough to make expeditions of several hours, there is nothing to be done. Egypt, however, is specially adapted to meet the requirements of those in whom the existence of chest disease, or the liability to it, renders bodily rest desirable rather than exercise. On such patients the atmosphere of the Nile acts as a charm. Cairo is not a good place to stay at, but there is a new hotel close to the pyramids of Ghizeh, and only a little more than an hour's journey from Cairo, where the air is that of the desert, and every comfort can be obtained, together with the advantage of special requirements for invalids. If one wants merely to be "pulled together" after an illness in the early part of the year, go to the Riviera, Corsica, or Italy, rather than to Egypt. If one wants unlimited sunshine and is strong enough to travel about, then go up the Nile on a *dahabiyeh*, or if that be unattainable, on a postal steamer, spending as few nights as possible in hotels.

The number of foreigners, always considerable, who flock to German Universities for the completion of their education seems to be increasing. During the present session there are no less than 1,930 foreigners out of the 29,000 students, that is, 6·6 per cent. of the total, which is said to be the highest proportion yet reached. During the summer session of 1889 it was 5·8. Nearly half the foreigners are Americans, and a very large proportion of the rest are Russians. Great Britain is credited with 117. Of course these figures refer to students from all the faculties.

Bicycling for Young People.—Dr. B. W. Richardson discusses this subject in a recent issue of the *Asclepiad.* He admits that since he first warned the public of the dangers of immoderate cycling, changes have taken place in the construction both of bicycles and tricycles which materially modify the old drawbacks. He is still, however, of opinion that cycling should never be practised by boys and girls, since it differs from other exercises in the fact that it molds the bodily framework, as it were, to its own mode of motion; and riders in course of time almost invariably acquire what he calls "the cyclist's figure," which is not graceful, and is not indicative of the possession of perfectly balanced powers. Of two things at least he is satisfied. They are that the temptation of "competition is to an earnest and practised cyclist a demon of danger," and that the systematic pursuit of cycling should never be fully commenced before the age of 21.

"**Persecuted" People at Large.**—The delusion of persecution is known to be a very dangerous one, and an interesting and sad example of this occurred recently in France. On December 18th of last year, M. Raux, Director of Departmental Affairs in the Seine Prefecture, was assassinated without apparent motive by one of his *employés*, in whom he had taken great interest, a young man named Regad. Now it appears that M. Roux in 1866, on a visit to the asylum of Chalons-sur-Marne, had spoken to Dr. Henry Bonnet about this young man, saying that Regad was very "original," that he had doubts about his own mental equilibrium, and M. Roux ascribed all this to the "effervescence of youth," while at the same time asking Dr. Bonnet for his opinion. The latter had wisely said, "Be on your guard! Approximately I diagnose 'un instinctif avec idéss de persécution.' This man," he continued, "is a man who can form his own plans most methodically, and carry them out to a fatal issue. 'Un aliéné persécuté est persécuteur.'"—(*Annales. Med. Psychol.*, March, 1890.)

THE Sanitary Institute is to hold its meeting this summer at Brighton, whither it had been invited by the Mayor and Corporation.

WM. ROBERT SMITH, M.D. Aber., B.Sc. Edin., D.P.H, Camb., Barrister-at-Law, has been appointed Medical Officer to the London School Board.

THE Governor of Hong Kong has been pleased to appoint Mr. J. Cantlie, M.B., and Mr. J. M. Atkinson, M.B., to be Justices of the Peace for that colony.

A FANCY bazaar in aid of the funds of University College Hospital, London, is to be held in the grounds of University College on Thursday, June 5th, and will be opened by the Duchess of Fife.

A PROJECT has been set on foot to hold an "International Congress of Female Physicians" at Chicago, during the World's Fair, which is to be organised there in the course of two or three years.

IN consequence of the outbreak of an epidemic amongst the nursing staff of the Derby Infirmary, Dr. Seaton, of London, has been commissioned to inquire into and report upon the sanitary condition of the building, which is also infested with rats.

THE Royal Westminster Ophthalmic Hospital, has received a cheque for £50 from an anonymous donator signing himself "Grateful," in recognition of a successful operation performed on the father of the donor upwards of fifty years ago by the late Dr. Guthrie.

MADAME ROSA KERSCHBAUM, who has taken the degree of Doctor of Medicine at a Swiss University, has just been authorised by special Imperial decree to conduct a hospital for eye diseases at Saltzburg. This is the first case of a lady physician being admitted to medical practice in Austria.

THE *British and Colonial Druggist* states that no less than 17 deaths from overdoses of antipyrine occurred during a fortnight in Vienna, during the prevalence of *la grippe*, when the sale of the drug was enormous. Until recently it could be bought freely by the laity, but since then, and partly in consequence of those fatalities, the sale of antipyrine has been forbidden except upon the prescription of a physician.

THE Paris Academy of Medicine has opened to competition a prize of the value of 100 francs for the best work on the hygiene of infants. The following is the question proposed: To determine what are, in the artificial feeding of infants, the value and the effects of raw milk, warmed, or boiled milk respectively. The papers, which should be written in French, the other academical rules being observed, are to be forwarded to the Academy before March 1st, 1891.

A CURIOUS case of survival after severe injury is reported from Zurich. An artisan went home drunk, and fell out of a window about 100 feet from the ground, probably in the attempt to shut it. He suffered a splinter fracture of both the frontal bones, with severe contusion of the brain in that region and efflux of brain substance. The man, who before his accident had been well-behaved, peaceable, good-natured, cheerful, and cleanly, became, malicious, slanderous, quarrelsome, violent, and dirty, but no other morbid symptoms due to the injury were observed.

MONUMENT TO DR. PHILLIPPE RICORD.—A committee has just been organized, under the presidency of Professor A. Fournier, with the view of raising a monument to the memory of the late Dr. Philippe Ricord.

DR. FARNIER has discovered that the salts of copper do not possess the poisonous properties formerly attributed to them. Hands immersed in a solution of sulphate of copper, although they retained the sense of touch, became insensible to pricks of a needle, or cuts of an instrument.

AN action has been brought against the Allan Royal Mail Steamship Company for £2,000 by a passenger who fell down an open hatchway and broke his leg. His complaint is chiefly directed against the ship surgeon, who is charged with not having paid proper attention.

A PETITION in favour of the admission of the Sisters of Charity to the hospitals has been signed by nine of the retiring municipal councillors—MM. Ferdinand Duval, F. Riant, Denys Cochin, Gamard, Lerolle, Dufaure, Despatys, Deville, and George Berry.

A DOUBLE MONSTER.—There is now on exhibition a double monster, known as the Tocci Brothers. The children are 13 years of age, and were born of an Italian woman living in humble circumstances. The body as far as the shoulders is single, but is double above. The stomach is common to the two children, and if one eats heartily the other has no desire for food, yet it is said that the two are very unlike in their appetites and tastes, one being fond of sweets, while the other cares only for substantials. The genital organs are male, but the face of one of the children is very feminine in its appearance.

THE epidemic, whatever it is, that has been raging in India for some time does not as yet show any sign of abating. There is a difference of opinion as to its nature, some maintaining that it is influenza, others that it is only a mild type of fever. It appears to have been as universal as the influenza was in England, and to have necessitated almost entire cessation of work in the manufactories and schools. Reports of outbreaks of influenza also comes from other quarters, notably Vellore in Southern, and Lucknow in Northern India. At the latter place it appeared about a few weeks ago, and promptly prostrated the larger portion of the garrison.

REMOVAL OF WARTS BY ELECTROLYSIS.—Dr. Patrzek, of Oppeln, describes, in the *Deutsche medicinische Zeitung*, his method of removing warts by electricity. The wart is first thoroughly moistened with a warm solution of salt. Both needles are then thrust through it just above the surface of the skin, and the current turned on, one element after another being added until pain is felt. Five cells are sufficient. With most cases two sittings of five minutes each are sufficient to destroy the growth, which gradually dries up and falls away, leaving a surface at first slightly reddened, but which later assumes the appearance of normal skin.

PRESCRIPTION FOR ACNE.—The following is quoted in the *Centrablatt für die Gesaminte Therapie*, March, 1890:—

℞.—	Salicylic acid Sodium borate	} of each - -	52 grains.
	Boric acid	- - - - -	40 „
	Alcohol Glycerin	} of each - - -	1½ ounces.
	Oil of bergamot	- - - -	5 drops.

To be used as a wash three times daily.

The London
Medical Recorder.

Article 390.

THE MONTHLY MIRROR OF MEDICINE.

Dr. Hughlings Jackson took for the subject of the Lumleian lectures, convulsive seizures; and, while such a valuable contribution to the subject of convulsions by Dr. Jackson, who has made the subject of convulsions peculiarly his own, will be widely read by all interested in the study of neurology, we venture to recall some of the facts mentioned in the lecture. And, firstly, we may mention Dr. Jackson's assumption "that convulsion results from excessive discharges of nerve cells," meaning liberation of energy during rapid decomposition of some matter in, or part of, those cells. He then divides convulsions into three classes, or kinds. He then, for a basis of classification, speaks of convulsions arising in different "levels," and the levels he divides into three. (1) The lowest, or first, level is defined as consisting of cord, medulla, and pores, and more completely as being that sensory-motor division of the central nervous system to and from which pass nerves for every part of the body. (2) The middle, or second, level of the cerebral system is composed of centres of the Rolandic region, and possibly of the ganglia of the corpus striatum also. It represents complex movements of all the parts of the body, from eyes to perineum. (3) The highest, or third, level of the cerebral system is made up of centres of the præ-frontal lobes, highest motor centres, motor division of the "organ of mind." It represents most complex movements of all parts of the body, from eyes to perineum. Of the "lowest level fits," three groups are classified. (1) Respiratory fits, as laryngismus stridulus—asphyxia. (2) Fits produced by convulsant poisons, as by absinthe, camphor; possibly some so-called uræmic fits, and, it may be, fits of a constitutional disturbance after urethral lesions. (3) A condition for fits consequent on certain injuries of the cord, or sciatic nerve, in guinea-pigs. Dr. Hughlings Jackson submits that fits attending the onset of infantile paralysis are lowest level fits, produced by action on the fronto-bulbar centres of ptomaines, the result of disintegration of nervous matter of the anterior bones. Middle level fits are fits produced by excessive discharges beginning in parts of the middle level of the cerebral system. They are of the character of *epileptiforim* seizures; while fits of epilepsy proper, or *epileptic* fits, are highest level fits. *Epileptiform* seizures are of three varieties. (1) Fits starting in the hand; in the thumb, or index finger. (2) Fits starting in one side of the face; near the mouth, or in the tongue, or in both. (3) Fits starting in the foot; nearly always in the great toe. Dr. Jackson's view, therefore, is that epileptiform movements begin most often in parts of the body having small movements. In severe fits of all kinds there is loss of consciousness. Cessation of consciousness at, or close upon, the onset of an *epileptic* fit is of value as a sign that the correlative physical process, the excessive discharge, begins in some part of "the organ of mind." Consciousness is lost late in *epileptiform* seizures, and in those of little range there may not be even defect of consciousness. After epileptiform seizures, local temporary paralysis, and sometimes aphasia, may occur with it.

Mention must be made of Dr. Newton Pitt's Gulstonian lectures on some cerebral lesions the lecturer confining himself to dilating upon the unpublished records of Guy's Hospital. The first lecture dealt with fatal cases of ear disease. The left ear is that more frequently affected. The most common situation for abscesses is in the temporo-sphenoidal lobe, and they are often associated with an inflamed or sloughing dura-mater over the anterior surface of the petrous bone, or with a collection of pus beneath it. Other complications, except meningitis, are infrequent, which is due generally to extensions or ruptures of the abscess which is usually situated close to the root of the tympanum. Cerebral abscesses only occur when otorrhœa has lasted for months or years. The symptoms usually come on insidiously, being vague for a considerable time, which is spoken of as the latent stage, when there is headache, vomiting and a slow, dull mental condition. After a period the acute stage is entered upon, which may last for a week. Agonizing headache is a most marked symptom. The temperature is rarely high when the cerebral abscess is uncomplicated; in six cases it was not above the normal; in eight it was high; three of these had meningitis, two thrombosis of the lateral sinus, and two marked lesions of the dura-motor. The pulse is often increased in rate, but when the abscess is large it may become slow and irregular. Tenderness of the scalp is not especially noticed. Rigors and pyrexia are not frequent in uncomplicated cases, but both occasionally occur. A headache of intense severity, and a dull, sluggish mental state are the two most characteristic symptoms. Optic-neuritis is most frequently noticed, and when present is due mostly to a complication. Thrombosis of the lateral sinus occurred in twenty two cases of fatal ear disease. In some cases the thrombosis was suppurating, in others it had set up a pulmonary pyæmia. The disease more often spreads from the posterior wall of the middle ear than from the mastoid cell, and hence the treatment of such a case must be directed to the bone and dura mater as well as with the sinus. The otorrhœa is usually of long standing. The onset is usually sudden, the chief symptoms being pyrexia, rigors pains in the occipital region and in the neck, associated with a septicæmic condition. Earache is most common, vomiting and coma are also met with. Well-marked optic neuritis may be present. The appearance of acute local pulmonary mischief or of distant suppuration is almost conclusive of thrombosis. The second lecture was on meningitis and tubercle secondary to ear disease: cerebral abscess and sinus thrombosis due to other causes than ear disease. Meningitis may occur within two days of the onset of otorrhœa, and in the probable lesion in the early days of ear trouble if any complication is present. Some evidence was adduced to show that otitis media, when of a tubercular nature, may be the means of infecting the brain with tubercular instead of with simple inflammatory products. The notes of a case of pernicious anæmia, read before the Medical Society by Dr. Hunter, may be reflected. The case proved the increased destruction of the blood; that the destruction was effected by the absorption of poisons of cadaveric nature from the intestinal tract. Dr. Hunter had isolated from the urine a ptomaine, identical apparently with putrescine, a body never found in urine in health, and hitherto found only in one other disease—cystinuria. He attached importance to this as pointing to the presence of specific micro-organisms in the intestinal tract, by whose agency it was formed, since it was never found in urine, as the result of the action of ordinary putrefactive bacteria in the intestinal tract. The diagnosis he considers is now comparatively easy. The factors of importance being the changes found in the blood and the associated changes in the urine and fœces, the blood presenting a deficiency in corpuscles *with a high percentage of hæmoglobin*, while the urine showed a high colour, with a normal quantity and low specific gravity, there being also the occasional presence of pigment granules. The presence of pathological urobilin was almost pathognomonic. In reference to treatment—the removal of the cause was advocated which could, however, only be done in the early stages of the diseases. The best method of treatment is to wash out the stomach thoroughly. The administration of B. naphthol, which possesses strong antiseptic properties, should be tried. The symptoms should be combated, the diarrhœa checked, and the condition of the blood improved by carefully regulating the diet and avoiding an excess of nitrogenous food. Prof. Thomas Fraser, in an article on albuminuria and life assurance, points out that for the purpose of arriving at a decision with regard to the eligibility of a proposer in whose urine albumen has been discovered, three groups may be adopted:—(A.) In which the urine contains a large, or fairly large, quantity of albumen. If the urine contains more than one-eighth of albumen after having stood at rest for 24 hours the proposer should be rejected, unless some disease of the bladder or urethra exists. (B.) In which the urine contains a smaller quantity than one-eighth of albumen. The proposer should then be rejected if there is (*a*) increase in the quantity of urine, *i.e.*, more than 50 ounces in the 24 hours; (*b*) enlargement of the heart; (*c*) increase of arterial tension; (*d*) low specific gravity; (*e*) a sediment containing epithelial, fatty, or granular casts; (*f*) dropsy, or history of dropsy within last two years; (*g*) history of lead poisoning; (*h*) a history of scarlet fever; (*i*) evidence of gout or syphilis. (C.) In which the urine contains a small quantity of albumen unassociated with any evidence of important disorder in health. The urine should be re-examined on two or three successive days, the urine tested being a sample of the total urine of 24 hours. If no albumen be found on these subsequent examinations, proposer may be accepted. If any albumen found, defer for six months.

ARTICLE 391.

THE MONTHLY MIRROR OF SURGERY.

THE surgical feature of the past month, at all events, as far as this country is concerned, was undoubtedly the debate on abdominal surgery, which occupied two meetings of the Medical Society in London. There was a general concurrence of opinion that the task of introducing the discussion, which fell to the lot of Mr. Meredith, was ably performed. Perhaps, however, no one was quite prepared for the curious surprises, in the form of divergent opinions, which cropped up in the course of the debate. Not that recriminations, or exhibitions of unkindly feeling, were there to disturb and disfigure the harmony of the meetings, but quite the contrary. All the speakers, though obviously occupying, as it were, different points in the same field of action, merely confined themselves to explaining their views upon the question, and, where the opportunity of criticism offered, were gentle in their remarks. All this is precisely as it should be, and there is reason for congratulation that a debate of such interest to surgeons generally should have taken place.

Mr. Meredith, in opening the discussion, pointed out that in 1877 abdominal surgery was practically limited to the removal of ovarian tumours, and he compared the restricted field and high mortality of that time with the trifling proportion of deaths from these operations at the present time, and the vastly increased scope of the surgeon's skill, which now undertook the treatment of diseases of every organ contained in the abdominal cavity. He attributed much of the former mortality to the use of the clamp, and gave credit for the improvement of modern years—to the abandonment of the clamp in favour of the intra-peritoneal method of dealing with the pedicle; to the use of antiseptics, especially in the matter of cleanliness, and to improved methods of drainage. He then severally discussed hysterectomy, making special reference to the treatment of the stump; the operations for the removal of the uterine appendages; the effect of the removal of the ovaries on hæmorrhage due to the presence of the uterine fibroids—in the latter case, expressing disbelief that the return of the hæmorrhage was due to all the ovarian tissue not having been removed. He next spoke unfavourably of the result of Battey's operation, and subsequently proceeded to discuss the important question of the diagnosis and treatment of ectopic gestation, and the relative value of Porro's operation and modified Cæsarean section as a substitute for craniotomy in cases of obstructed labour. Abdominal section in the treatment of peritonitis, both tubercular and suppurative, was then noticed, and the good results obtained in the former cases pointed out. He preferred the abdominal method of dealing with pelvic abscess, because, among other things, it enabled the surgeon to evacuate the pus without opening the peritoneum. He dealt exhaustively with modern advances in the surgery of the liver and the kidney, and concluded by mentioning the present position of surgery in regard to the diseases of the spleen and pancreas. We have not space here to refer to the speeches of those who took part in the discussion, among whom may be mentioned Mr. Lawson Tait, Mr. Mayo Robson, Dr. Griffiths (of Swansea), Mr. Treves, Dr. John Taylor, Mr. Doran, Mr. Greig Smith, and Mr. Knowsley Thornton. The speeches have been fully reported in all the medical journals.

Apropos of abdominal section, Dr. Gardner reports, in the *Montreal Medical Journal* for last month, five cases in which he opened the abdomen for tubercular peritonitis. Of these cases, two recovered; one was still under observation, and two died. Briefly, in the first case, the abdomen was distended with a large fluid effusion and simulating an ovarian tumour. When the abdomen was opened, the fluid which first flowed was encysted and amber coloured, containing flakes, and in the last portions an obvious mixture of pus. No cyst wall could be separated or identified. Drainage and irrigation was carried out, but death took place six weeks after the operation, apparently from acute pneumonia. *Post-mortem*—Among other things, the anterior peritoneal cavity was found converted into a suppurating cyst, extending from the liver down into the true pelvis, in which lay the whole of the intestines, except the transverse colon, closely matted together by recent adhesions, miliary tubercles studding the surfaces everywhere. All the abdominal viscera were adherent to one another and to the parietes. In case 2, while there was marked abdominal enlargement, there was no fluid effusion; the apparent tumour was composed of an aggregation of adherent intestines and omentum, with disseminated tubercle. Nine weeks from the onset of the symptoms, the abdomen was opened. In many parts, but not universally, the peritoneum was found to be studded with miliary tubercle. Several coils of intestines were separated by breaking down the adhesions, and a drainage tube was inserted, and the abdomen closed with silkworm gut sutures. Improvement followed the operation, but was not maintained, death from exhaustion ensuing about six weeks afterwards. Case 3 presented no evidences of adherent intestines or omentum. The adhesions only existed about the ovaries and distended Fallopian tubes. The evidences of tubercle existed only on the Fallopian tubes, or, rather, were discovered on these organs only after the operation. The abdomen was opened, and the uterine appendages were removed. Both ovaries and tubes were densely adherent. The tubes were distended, like sausages, occluded, and filled with pus; their walls ulcerated on the interior, and much thickened. The patient made a tedious but, in the end, perfectly satisfactory convalescence. Cases 4 and 5 were of the same character, and presented similar histories and physical signs. In case 4, on abdominal section, the parietal peritoneum was found to be adherent to the omentum underneath, so that there was some difficulty in getting into the cavity of the abdomen. The omentum and intestines were matted together. Everything within reach was thickly studded with tubercle. Nothing further was done, The belly was closed without drainage. The recovery from the operation occupied about four weeks; and, about three months afterwards, to the surprise of the author, he heard that the patient was very much better; was able to walk and drive a great deal, with good general health. In the 5th case, abdominal section also showed the presence of unlimited amount of miliary tubercles upon intestines and peritoneum. There was no effusion. The omentum was adherent to the intestines, and also to the brim of the pelvis. Beneath it everything was matted together. Nothing further was disturbed. The incision was closed. After the second week the recovery was rapid, and the patient subsequently went for a trip, perfectly free from symptoms. The author remarks that three of his cases afford some evidence in favour of the theory that a cheesy deposit, the result of suppuration, is the parent of tubercle wherever found, and that in his patients the origin was in the suppurative disease of the appendages. He, therefore, thinks that the early removal of such focus is urgent in certain subjects strongly predisposed to tubercle, when other indications may not be strong enough to justify it.

The surgery of the spine has been recently dealt with by Dr. William J. White of Pennyslvania, and his conclusions are recorded in a paper published in the journal of the American Medical Association for April 19. The author divides the spinal troubles which may necessitate surgical interference into three classes, viz.: traumatism, caries, and neoplasms. The following are his conclusions upon the subject. In the first place the objections urged against operative interference in spinal injuries were, he says, partly theoretical (hæmorrhage, frequency of absolute destruction of the cord, pressure from inaccessible fragments of bone, etc.), and have been shewn to be supported by clinical facts. They were largely due to a well-founded dread of (*a*) the shock in the cases operated on in pre-anæsthetic times, and (*b*) consecutive inflammation, suppuration and pyæmia in pre-antiseptic periods. The later results, which now constitute our only safe basis for generalisation, are distinctly encouraging; and resections of portions of the vertebræ in fractures, possibly even dislocations, should be recognised as an eminently proper operation, and in suitable cases altogether warranted by the facts in our possession; and, further, such cases are by no means rare or exceptional. There can be still less doubt that the testimony of pathologists and practical surgeons indicates that the cause of the paralysis of Pott's disease is, in many instances, an extra-medullary prolification of connective tissue, assuming the density and proportions of a neoplasm, occupying the space between the dura mater and the interior surface of the laminæ, not apt to be associated with intra-medullary changes or with destructive degeneration of the cord, and very frequently removable by operation. Every case of local spinal lesion, believed to depend upon a tumour, and not distinctly a malignant or generalised disease, should be regarded as amenable to operative interference, no matter how marked the symptoms of pressure may be, or how long continued. The method of extension is well worthy of preliminary trial in the first two classes, but it has not yet been tried in a sufficiently large number of cases to establish its exact limitation. Nevertheless, it is a therapeutic measure of vast importance in spinal injury and disease. It is customary and proper in deciding upon any serious surgical procedure involving risk to life, to consider well the prospects of the patient in the event of non-interference, and to be largely influenced by them. Regarded from this point of view the operative surgery of the spine, with respect to injuries, caries, and neoplasms may fairly be said to have a rapidly widening field, and to deserve more serious and careful consideration by practical surgeons than it has received for many years.

ARTICLE 392.

BLOOD-LETTING IN ANCIENT AND MODERN MEDICINE.

IN the *Gazzetta degli Ospidali*, Nos. 26, 27, and 28, 1890, Dr. Nascimbeni Ferruccio gives a complete account of the history and physiological effects of blood-letting. In ancient times venesection was used in medicine by the Egyptians and the Greeks. It was recommended by Hippocrates, Celsus, and Galen, and practised by the Arabs. In 1500 A.D. there was a controversy to decide whether in pneumonia and pleurisy blood should be drawn from the arm corresponding to the affected side, or from the opposite side. Charles V. issued an edict against the University of Salamanca to enjoin phlebotomy on the same side as the disease. In the seventeenth century there began a struggle between the advocates and the opponents of blood-letting. Van Helmont proclaimed that venesection, especially in pleurisy, was to be shunned like the pest or poison; and Guy-Patin observed that Helmont himself died of pleurisy because he would not allow blood to be let. Though there were always dissentients, blood-letting continued to hold a very prominent part in medical treatment until times easily within memory. Thirty years ago the celebrated Bouillaud, of Paris, still practised blood-letting in all inflammatory diseases, *usque ad animi deliquium*. On the

Continent, Skoda was one of the most distinguished who attacked blood-letting, both in theory and in practice. As it lost ground. the old advocates of antiphlogistic treatment maintained that the type of the disease had altered, and that people did not stand bleeding as they had done twenty years before. Patients had become more anæmic and nervous than formerly. Of course this was a point which never could be settled by exact observation; but it is certain that the lancet had been in use for thousands of years, and that it was not those who attacked venesection who employed the argument that the type of disease was changing. Half a century ago practitioners put leeches on the chests of phthisical patients; but will any one contend that tubercle has changed its character since then? Dr. Ferruccio observes modern physiology has shown the primary importance of the blood, so that it may be said of the circulating fluid what Hippocrates said of the stomach, *Omnibus dat et ab omnibus accipit*.

Dr. Ferruccio tells us that Stephen Hales, in his Statical Essays, was one of the first to prove that during a loss of blood the pressure of the blood current diminishes. Hales' observations were made on horses, and they have been repeated on other animals by Marey, Volkmann, Chauveau, and Buisson. Lorian made observations upon the human subject. These physiologists came to the conclusion that the pressure of blood after venesection varies according to the quantity of blood withdrawn. If in a dog, for example, blood equal to one per cent. of the bodily weight is taken, the pressure is diminshed, and this depression remains for some time and then gradually passes away. This re-establishment of the normal pressure does not take place, if the loss of blood has exceeded three per cent. of the bodily weight; and the greater the quantity withdrawn the longer is the time which elapses until the usual standard of pressure is regained. The re-establishment of the blood-pressure, after small blood-lettings, is, according to Foster and Cohnheim, too rapid to let us suppose that the mass of the blood has been replaced from lymph and the fluids of the parenchyma. It is probably owing to the increased action of the vaso-motor nerves, through whose agency the peripheral resistance to the passage of the blood is increased. The vaso-motor system has thus a certain power in adapting the organism to a diminished quantity of blood. The effect of blood-letting varies in different animals. In general, dogs, guinea-pigs, and cats can support a loss equal to the fourth of their whole mass of blood without notable diminution of pressure. In the guinea-pig and most mammals the arterial pressure diminishes in the inspiration, and increases in the expiration. In the hog the arterial pressure increases in the inspiration and decreases in the expiration. Fredricq has shown that if the loss of blood is equal to the third part of the total quantity, the arterial pressure increases in the inspiration; but if the loss is equal to the half of the total blood, the pressure diminishes in the inspiration; but if the loss of blood is sufficient to entail death the pressure again rises.

After a large blood-letting, the pulse increases in frequency and diminishes in force. Marey states that the frequency of the pulse is in the inverse ratio to pressure of the blood; but this formula does not always hold good. The circulation of the blood cannot be reduced to mechanical laws. The influence of blood-letting on the cardiac pulsation is modified by the pneumogastric nerves varying according to their functional energy, and the arterial pressure is regulated by the vaso-motor nerves, which augment the peripheral resistance to the circulating current. When the blood pressure is lowered to one-third of the normal cipher, the frequency of the pulse increases; but when the pressure is between a third and a fourth of the normal figure, the number of pulse-beats in the minute is the same as in health.

After an abundant bleeding, it is easy to ascertain, through the sphygmograph, a dicrotism of the pulse, though this is not perceived by the touch.

When the pressure of the blood is greater, the resistance to the systole is increased, and a greater quantity of blood penetrates into the coronary arteries. Marey has shown that the increased frequency of the pulsations after loss of blood is to be explained by the lesser quantity of oxygen conveyed by the lesser number of blood globules, so that it was found by Antonelli and Pelaggi that, after subjecting dogs to repeated bleedings, the pulse ceased to become quicker when the animal was made to breathe an atmosphere of oxygen.

The breathing is also quickened after loss of blood, which allows the respiratory process to be accomplished without any marked change in the absorption of oxygen or the elimination of carbonic acid.

There are conflicting statements as to the effect of bleedings on the more permanent tissues of the body; but the author prefers the careful experiments of Bizzozero and Salvioli, who could find no fatty degeneration in the tissues of animals upon which repeated blood-lettings had been practised.

There is a diminution of the temperature of one or two degrees C. after a bleeding of from 150 to 200 c.c. In experiments on animals, the loss of heat is found to vary in different species.

The effects of loss of blood on the nervous system have been very carefully studied. When the brain is supplied with blood diminished in quantity and poor in oxygen, there is first excitement and then depression. Other symptoms, headache, vertigo, flashes of light before the eyes, darkening of the vision (amaurosis through anæmia of the visual centres and the retina), sounds in the ears, hallucinations, eructation, vomiting, hiccup, and a cold sweat. These are all dependent on cerebral anæmia. After profuse hæmorrhage, epileptiform convulsions are not uncommon.

We look forward with much interest to the continuation of Dr. Ferruccio's careful studies in the clinical effects of venesection upon diseased processes.

W. W. IRELAND, M.D.

ARTICLE 393.

HERSCHELL ON THE SCIENTIFIC USE OF PURGATIVE BITTER WATERS.

IN the natural purgative bitter waters the physician has ready to his hand remedial agents of inestimable value to him in his practice, if he only knows how to use them rightly. But I think that I may venture to say that, in not one case out of every hundred where they are employed, are they habitually utilised to anything like their full capabilities.

The cause of this is the fact, that the average practitioner has not devoted that study to their physiological actions and therapeutic uses which he has bestowed upon the other drugs in his repertoire, and merely regards them as useful purgatives, to be given once in a while, instead of a purgative pill, when the patient requires to have his bowels freely opened.

But it is not as an occasional purge that they should find their greatest use in practice, but the fact should be utilised that, by means of these agents, given in a *prolonged and carefully-regulated course,* we are enabled to exert profound curative and alternative action upon the system.

On the Continent, however, this fact is more generally appreciated, and courses of treatment at the various Spas form a very large part of the routine practice of medicine.

In this country, although the same diseases which are thus so beneficially affected are to be found in the same abundance, yet this method of treatment has never hitherto gained any great ground, from the fact that we have no purgative mineral springs in England of any value, and that the great majority of patients cannot afford a long continental holiday. It has often been pointed out that there is nothing magical in the locality where the spring is situated to produce the good results which follow a course of treatment at a mineral spring. It is the strict diet imposed on the patients, the regular exercise in the open air, and the systematic method of administering the water, that do the good.

And we do not sufficiently realise that all the benefits which are to be obtained by a course at Kissengen or Carlsbad can be procured at home by a careful and scientific administration of the waters at one's own house, and with the great advantage of not having to abandon one's business.

To produce this valuable result, all we have to do is to imitate, as closely as possible, the essential conditions under which the waters are taken at the foreign watering-places.

But, first of all, we must make a choice of which water we are going to use. In order to attain the highest success in the treatment of one's cases, it is far better to study thoroughly one kind of water, and master its peculiarities, than to experiment with different sorts, each having a different dose and special attributes of its own.

The advantages of one mineral water over another may be put under the following heads:—

Smallness of dose;
Absence of unpleasant effects;
Sulphates of soda and magnesia in nearly equal proportions;
Absence of unpleasant taste.

On examining the chief waters on the English market, with a view of making a selection, one is struck by the fact, that a newly-imported water, called Franz Josef, from a spring at Buda Pesth, contains 190 and 178 grains to the pound of sulphates of magnesia and soda respectively. This is much in excess of the quantities contained by either Hunyadi, Friedrichshall, or Æsculap. It is evidently, then, the strongest by far of any water on the English market; and, fortunately, *happens to be almost tasteless.*

For this reason, I now employ it in my practice, to the exclusion of all others, and am well satisfied with the results I have obtained.

The fact has now, I think, been pretty accurately determined that an ideal purgative water should contain nearly equal parts of the sulphates of soda and magnesia, as by this we secure the hepatic action of the soda salt without the unpleasant taste of waters which contain sulphate of soda only, and in which you almost invariably find more than traces of sulphuretted hydrogen.

In starting a patient on a course of purgative water, you must try and imitate the *essentials* of his life at a foreign Spa. That is to say, you must insist upon a sufficient amount of exercise in the fresh air, a diet which contains the minimum of saccharine and fatty matters, and absence of worry and business cares to as great extent as possible. If you can secure this, there is no necessity at all to go abroad to realise the full benefits of the treatment.

But as a little concrete teaching is worth much more than a much larger amount of purely abstract considerations, we will take a supposititious case of a city man, who is suffering from lithæmia, or, as he would call it, "torpor of the liver," and who is undergoing a six weeks' course of purgative waters and describe what one day of his life should be.

He should rise at seven o'clock, and, after having well rubbed himself down with a towel wrung out in warm water, finishing off with brisk friction with a dry flesh glove, and, after a 10 minutes' spell, with light dumb-bells, proceed to dress leisurely. While he is doing so, he will drink by sips a tumbler of hot water containing just as much Franz Josef water as has been found by experiment to produce a single action of the bowels. The quantity will probably be less than a wine-glass. The water must be hot, not lukewarm. After this a gentle walk of half an hour or so, and breakfast at 8.15 or 8.30. For breakfast he should take a little white fish or an egg, cold meat or game; dry toast, *with a very little butter*—but if he can be induced to forego the butter it will be better; weak tea or Schweitzer's cocatina, sweetened with one of Burrough's saccharin tabloids.

Lunch should consist of little more than a lean mutton chop, or a steak, with green vegetables, stale bread, and mashed potatoes. A little sound Hock or table claret may be taken, or a little weak, well-diluted spirit.

Finishing his business not later than four or five o'clock, he should take at least one hour or an hour and a half in the open air, gently walking or riding, and dine about seven.

At dinner a clear soup, grilled or boiled fish, roast or boiled meat; plain boiled green vegetables; stewed fruit, sweetened with saccharin; and drink, the same as lunch. The essential point of diet being to avoid almost entirely fat and sugar and the stronger forms of alcohol. After dinner, gentle recreation in open air, or a game of billiards, which latter provides a considerable amount of exercise. Retire to rest early, after 10 minutes at the dumb-bells.

In my experience I have found that, from a course of treatment carried out in this manner, the patient will derive almost as much benefit as if he had gone to Carlsbad or Kissengen.

And now, as to the classes of cases which are benefited by a prolonged course of purgative water.

CHRONIC BRONCHITIS AND ASTHMA.

One often observes cases of chronic bronchitis which do not improve under the usual treatment with expectorants, and which are accompanied by frequently recurring attacks of pseudo-asthma. The dyspnœa increases, and there is a considerable amount of dyspepsia and constipation, partially due to the medicines which have been given to subdue the cough. In order to relieve these cases, we must direct our treatment not to the air tubes, but to the stomach and liver, as the trouble very largely depends upon congestion of the liver and plethora of the abdominal circulation. As the patients feel weak and low, they have been attempting to "keep up their strength" by abundance of nitrogenous food and alcohol, and are being really poisoned by the results of the luxus consumption. As Lauder Brunton appositely observes, they resemble a fire on which too much coal has been heaped; it becomes choked with its own ashes.

Cases like these are immensely benefited by a dose of Franz Josef water, taken early in the morning in a tumbler of hot water, at the same time that their diet is cut down, as regards its nitrogenous constituents, to what is really required by the organism.

CHLOROSIS AND ANÆMIA.

The tendency of modern thought upon this subject appears to lean to the hypothesis, that this diseased condition is probably due to the absorption into the system of poisonous materials elaborated in fœcal matter which has been abnormally retained in the viscera. This view of the subject was introduced to the notice of the Profession in a paper entitled, "Observations on the Anæmia and Chlorosis of Girls," which was read before a meeting of the Medical Society by Sir Andrew Clark in November, 1887.

If such is the case—and experience appears to confirm the theory—the use of purgatives is quite as important in the treatment of this affection as the administration of iron and arsenic, and may be advantageously combined with it.

I have often thought that possibly the good which the internal administration of iron effects, may possibly be due to its disinfecting action upon the fæces, the insoluble sulphide of iron being thrown down, somewhat after the manner of treating sewage, known as the "precipitation method."

LITHÆMIA, BILIOUS DYSPEPSIA, GOUT, CONGESTION OF PROSTATE, AND PELVIC VISCERA.

It is these cases which we usually send abroad to the purgative springs, and which derive such benefit therefrom, the victims of which often apparently enter on a new lease of life after a well-directed course.

Whether in lithæmia or bilious dyspepsia there is really a state of congestion of the liver, or whether, as Murchison believed, there is not only a defective secretion of bile, but also an interference with the normal processes by which albumin is disintegrated with the result of uric acid being formed instead of urea, it is quite certain that a course of this kind does do a great deal of good, and, in fact, very often absolutely cures the patient, if he can only be induced to live more hygienically in the future.

George Herschell, M.D.

Article 394.

MINKOWSKY ON THE ABSORPTION OF FAT.[*]

The following is the substance of an address delivered by the author before the Scientific and Medical Union in Strasburg:—Most authors who have worked at the theory of the absorption of fat begin by remarking the great number of investigations which have been made, and the small number of firmly established facts. Fat is received by the intestines, and we find it again in the lacteals, in a state of minute subdivision, but essentially unaltered. How has it got there? by what route? in what form? and what are the impelling forces? These questions still meet with various contradictory answers. To go into all the theories of the subject would take up too much time, but the most important points of the chief theories will be mentioned. Fat-absorption is no longer explained by the simple processes of filtration and diffusion. Not even the absorption of water can be accounted for in this simple way. "Vital processes" are again invoked, or, we may say, a total of chemical and physical processes, which, as yet, we are unable to enumerate.

As regards fat, two chief theories present themselves, and from these a third. The first theory is, that fats supplied as food are emulsified, and that the minute globules are passed into chyle-vessels (lacteals) by the cellular activity of the superficial layers of the intestinal mucous membrane. As to the particular cells which are active in this respect, histologists differ among themselves, some looking to the rod-shaped processes of the basal fringes of the *cylindrical epithelial cells*, others to the *leucocytes* lying between these cells (Zawarykin). In the latter case, the analogous action of phagocytes is invoked; but the latest investigations of Heidenhain, Krehl, and others are adverse. The second theory, put forth by Kuehne, and experimentally founded by Radziejewski, maintains that neutral fats are first split up in the intestine, viz.: into fatty acids and glycerine; the fatty acids then unite with alkalies in the intestinal juice, to form soluble and easily diffused soaps, which, later on, are reconverted into neutral fats by a synthetic process. It is a fact that fats are split up in the intestine, and that the organism can synthetically produce fat out of the fatty acids (Radziejewsky, Munk). This synthesis has been proved to occur in the intestinal mucous membrane (Perewoznikoff, Will, Ewald, Minkowsky). But there are weighty reasons against the assumption that the whole normal process of fat-absorption takes place in this way. Only to give one, a diet rich in fat would require more alkali than the intestines, or even the whole body, could afford.

The third (intermediate) theory is the one most in favour at present, viz.: that the chief part of the fat is absorbed as neutral fat in the form of an emulsion, but that, in the formation of this emulsion, some fat must be split up. This theory rests on the fact, that a fat holding a free fatty acid will form with alkaline carbonates a fine emulsion by mere agitation, the soap molecules lying between the molecules of neutral fat (Brucke, Gad). In this instance, therefore, only as much neutral fat is decomposed as will provide enough fatty acids for the soap emulsion of the whole, with the aid of the alkaline secretions poured into the intestine.

Let us turn now to these, viz.: the *bile*, the *intestinal juice*, and the *pancreatic juice*. As to the *intestinal juice*, most authors, excepting Selieff, deny to it any special action on food. Hoppe-Seyler thinks it doubtful whether there exists any particular intestinal juice as a secretion of the Lieberkühnian follicles. But Bunge thinks the large amount of alkali present constitutes its chief importance. The *bile* certainly plays a part in the absorption of fat, for in its absence this absorption is hindered. It is only hindered, not altogether prevented, even in complete absence of bile; therefore the bile is not essential to fat-absorption; it only favours it. As regards the *pancreatic juice*, it can split up fat, so can the bacteria of decomposition; and it can emulsify it, so can the other intestinal secretions; hence its *rôle* is more modest than was once assumed. Claude Bernard, in 1849, said that fat could not be taken up without the aid of the pancreatic juices, and he gave a whole series of observations and arguments. But one support after another has been removed from this theory, until at last Martinotti has shown that the entire removal of the pancreas may be effected without prejudice to the absorption of fat. Fr. Mueller (who has studied this subject in icterus and pancreatic diseases) has also come to the conclusion that the steatorrhœa, so often noticed in disease of the pancreas, is in all probability due to contemporary derangement of the bile.

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[*] *Berliner klin Wochenacher*, No. 15, 1890.

The author induced Dr. Abelmann to undertake quantitive estimations after removal of the pancreas in animals, and important results have been obtained. (Abelmann's "Dissert. ueber die Ausnutzung der Nahrungstoffe nach Pankreasextirpation." Dorpat, 1890). In the first place, after the removal of the entire pancreas, fats supplied as food were no longer absorbed, *with the exception of the fat of milk.* All other fats were re-obtained from the fæces in their entirety (butter, olive oil, lipanin, fat of yolk of eggs, and fat of meat). But if fresh pancreas of the pig was supplied in the food along with the fats, then the latter were for the most part absorbed. It appears, therefore, that Claude Bernard's contention is established after all.

It might be objected that the non-absorption of fat after removal of the pancreas was due to disturbance of neighbouring organs and derangement of other secretions. But in these experiments, viz.: after total removal of the pancreas, the fæces held bile, the ductus choledochus was pervious, the duodenum was stained, and the gall-bladder held a large quantity of bile, which contained the normal amount of colouring matter and bile salts. Secondly, the fats (in the fæces) were, for the most part, split up. This fact proves that it is wrong to assume that normally the fats are absorbed in the form of soaps. It may be answered that the pancreas might afford the necessary alkali for saponification normally; but against this must be put the fact that the normal reaction of the duodenum during digestion is acid, not alkaline. Moreover, when fresh pancreas was given in the food, fats disappeared from the fæces. Again, when soaps were given in the food the fatty acids were re-obtained from the fæces. The other theory, that part of the fat supplied is split up to emulsify the rest, is also opposed by these experiments.

A pregnant fact in these experiments must be borne in mind, viz.: that after removal of the pancreas, the fat contained in milk was entirely absorbed. Hence the fat in this case is in the normal condition for absorption—this condition is a fine emulsion.

Does the emulsion of milk fat (and the similar emulsion after the action of pancreatic juice) differ from the emulsion caused by alkaline carbonates? It does. As Bernard showed, the pancreatic emulsion is both finer and far more resistant to acids, and he attached more importance to this than to the capability of the pancreatic juice to split up fats. The emulsified fat found in the chyle vessels is similar (*v.* Frey); so is the emulsion contained in milk—it resists the action of acid to a remarkable extent. What is the cause of this peculiar emulsion? Landwehr attached importance to certain "animal gums," and asserted the richness of pancreatic juice in such. These, he said, caused emulsion; but there are many objections to this theory.

Kuehne pointed out long ago that the lacteals take up fat alone, never solid particles, such as colouring matter, etc., however fine. He ascribed the mutual attraction to the fine albuminous membrane surrounding the fat-particles, and favouring adhesion to the protoplasm of the epithelial cells. The existence of this membrane has recently been questioned, still it is quite possible that some special form of albumen may be implicated in the process of fat-absorption.

It is clear that all fats, except the fat of milk, requires the action of the specific pancreatic secretion before they are fitted for absorption. The peculiarity of milk has a certain teleological significance, for it is probable, from the experiments of Korowin and Zweifel, that the true pancreatic juice begins to be secreted several months after birth, and in milk the suckling has a nutriment capable of absorption independent of the pancreas. This behaviour of milk also explains the negative results with regard to pancreatic action in fat, obtained by many experimentors (Fr. Mueller, etc.). These negative results may be also partly explained on the supposition that part of the pancreas was left behind, after supposed removal. Now, in such a case, although the part left may not be in direct communication with the intestine, still considerable quantities of fat are absorbed by the lacteals.

As the absorption of other foods, after removal of the pancreas, Dr. Abelmann found that about half the albumens and two-thirds of the starches introduced were absorbed. This result is not surprising, for Hirschfeld has shown how in many diabetics the absorption of albumen and fat was deranged, and it points to pancreatic derangement as the possible source of diabetes, in some cases at least.

E. J. Edwardes, M.D.

Article 395.

JACOBI ON THE ACTIVE PRINCIPLE OF COLCHICUM.

In the *Archiv. f. Exp. Path. und Pharm.* for April, Dr. Carl Jacobi communicates an elaborate research on the active principles of colchicum. He shows the colchicine discovered in 1887 by Houdé-Laborde, and that differently produced and carefully investigated in the same year by Zeissel, to be one and the same substance, having the formula, $C_{22} H_{25} NO_7$, assigned by the latter observer. The crystals, when perfectly pure, are almost colourless, and easily soluble in alcohol, chloroform, and water. They are, however, with difficulty freed from another body, also present in the seeds, and named oxycolchicine by Jacobi, whose analyses indicate for it the formula $(C_{22} H_{25} NO_6)_2O$. Physically this differs from colchicine chiefly in being amorphous, red-brown in colour, and somewhat less soluble in chloroform. But the two substances contrast sharply in their effects on frogs. Under doses of 50 mg. of colchicine, injected into lymph sac, or abdominal vein, these animals suffer only a temporary weakness, while they are killed by 5 mg. of oxycolchicine. It is a striking fact, however, that in warm-blooded animals this divergence of action is not observed, but, on the contrary, a strict agreement between the two substances—even to the amount of the lethal dose. Now, as Jacobi shows, colchicine becomes changed to oxycolchicine both by the slow action of air and light, and by contact with nascent oxygen. If it could be proved that a like transformation is effected by the living tissues of warm-blooded animals, well known to act as oxydizers on various substances, the activity of colchicine in these animals would be readily explained. Jacobi describes in detail a careful experiment which he made, to decide this point, on the kidney of a freshly-killed pig, Schmiedeberg and others having shown that in this organ more especially oxidation processes take place. After maintaining in it for a short time a circulation of difibrinated blood containing pure colchicine in solution, he found that part of the latter had been converted into oxycolchicine; then, by a check experiment, he satisfied himself that this had not been effected in the blood. He concludes that this oxidation must occur to a far greater extent in the organism of a living animal.

In frogs the toxic symptoms of oxycolchicine begin about half an hour after a 5 mg. dose, in exaltation of reflex excitability. An hour or more later, the characteristic effects upon the muscles are observed. Prompted to a leap, the frog performs the act in the usual way, and with much vigour; but the thighs remain extended, and are but slowly drawn up again. Simultaneously the muscles exhibit fibrillar twitchings, which soon, however, subside. These phenomena, recalling the action of veratrin, continue, with intermissions, for some time. They are succeeded by spasmodic movements, which pass into regular reflex convulsions; at first, clonic, but afterwards constituting a veritable tetanus, which may last for a day or two. In some cases it happened that, in the later stages of poisoning, the convulsive attacks could no longer be excited by external stimuli, but came on the moment the frog attempted to move. The explanation of this phenomenon is, perhaps, to be found in the complete anæsthesia of the skin present in advanced poisoning. Finally, the animal dies from general paralysis. The muscles retain their irritability for some time after full onset of the paralysis, but lose it some hours before the heart ceases to beat.

The minimum lethal dose for dogs and cats was found to be 1 mg. per kilo. of body weight. Rabbits died after doses of 6 to 10 mg. For men, the minimum of 1·25 mg. per kilo. of body weight, fixed by Mairet and Combernall, is probably pretty correct for the dose by mouth; hypodermically, the drug causes extensive inflammation.

Whatever the dose, and whether injected subcutaneously or into the veins, the symptoms of poisoning did not appear in warm-blooded animals till after an interval of from one to three hours. In dogs and cats, salivation, nausea, and manifest abdominal pain, were succeeded by more or less violent vomiting and diarrhœa, which continued after complete evacuation of the digestive tract, and only ceased immediately before death. In several cases, however, these symptoms played a quite subordinate part, the discharges being few and small, or even entirely absent. Rabbits, which are well known to be unable to vomit, had dejections merely, and these not particularly copious. Sooner or later, motor disturbances evinced themselves. The animals grew sluggish, and loth to stir. There appeared a gradually ascending and deepening central paralysis, becoming ultimately complete in the hinder extremities. As the fore limbs were being encroached upon, the breathing, till then little affected, showed a marked alteration—respirations, though vigorously performed, rapidly diminishing in frequency till death supervened. In rare cases only, there broke out, just before the end, short convulsions, like those from suffocation. Simultaneously with the motor phenomena, anæsthesia began, and gradually spread itself over the whole surface of the body—sometimes, indeed, quickly reaching a point of great intensity. This symptom was in rabbits, however, frequently wanting. As has been observed in men who have succumbed to this poison, so in animals consciousness seems generally to remain to the last, though dogs in the advanced stages become quite apathetic. In doves, the symptoms are very similar to those in mammals. The heart continues to beat sometimes twenty minutes after cessation of the breathing, and in frogs not rarely for thirty hours after the central paralysis is completely established.

Where death had occurred with violent abdominal symptoms, the intestines were found firmly contracted; while on the swollen and loosened mucous membrane, notably of stomach and large gut, were seen, more or less, numerous and extensive hæmorrhagic patches. These were almost invariably absent from the lowest part of the ileum. In chronic cases, or where the discharges had been less severe, either no pathological alterations were observed, or only a few small and scattered ecchymoses in stomach, duodenum, and rectum. The right heart, and abdominal and mediastinal veins were gorged with blood. In many cases there was renal hyperæmia. But the softening of nerve tissue, which Warucke found in the cord in one case, and which he supposed to be a characteristic appearance of colchicine poisoning, was absent from both brain and marrow in two cases in which these parts were examined.

Contrary to what has been stated by several observers, the circulation is little affected by colchicine, except in prodigious doses, and death cannot, therefore, be attributed to cardiac paralysis.

Oxycolchicine in frogs, and colchicine in warm-blooded animals, induce an alteration in the substance of the striped muscles, giving rise, when these are tested by the myograph, to a peculiar curve, almost identical with that given under the influence of veratrin. Their exhaustibility is also markedly increased. This condition of the musculature, no doubt, contributes to the excessive feebleness always observed, and possibly, also, to the fatal issue.

Though the intestinal phenomena are generally the most prominent feature of the poisoning, only two observers, Paschkis and Rossbach, have given them more than scant attention. The former sought, by opening the abdominal cavity, to investigate the action of the colchicine upon the bowels; but, through omitting to guard them from the injurious action of the air, obtained only negative results. Following the method of Sanders and Braam-Houckgeest, Jacobi observed the abdominal contents of cats and rabbits under a warm 6 per cent. solution of sodium chloride. The animals were given, by intravenous injection, from 20 to 60 mg. of colchicine, or oxycolchicine, the first indications usually appearing two or three hours after. Peristalsis began in the duodenum, and gradualIly traversed the whole length of intestine. The movement was repeated in paroxyms, becoming in each more rapid and violent, till sometimes the bowel seemed in places contracted to a cord. After a time, a pause of longer duration would suddenly occur, generally, however, without any slackening in the contraction of the large gut. When the canal was empty, the movements, though less energetic, proceeded in the same order. Since Rossbach had shown that neither the splanchnic nor the vagus is affected, and that no direct paralysing action is excited on the muscular coat of the vessels, it was necessary to determine whether the peristalsis was due to stimulation of the nervous apparatus in the walls of the intestine, or to direct excitement of its muscular fibres. Atropine was for this purpose injected, and had the effect of immediately arresting the movements, except in rabbits, in whom atropine directly stimulates the unstriped muscles. It must, therefore, be concluded that colchicine acts upon the intrinsic nerves of the intestine. Did this action consist, however, as that of muscarin, in a direct stimulation, the phenomena would appear, as in poisoning by that drug, simultaneously and with like intensity over the whole intestinal tract. So far from this being the case, the movements induced by colchicine observe a normal succession, and are merely more frequent and violent. It would seem, therefore, that this poison simply heightens the excitability of the nervous apparatus, so that every impression made upon the mucous membrane, whether by ingesta, mucus, or air, gives rise to violent peristaltic action. Experiments on rabbits showed that the respiration is little affected during the first eight hours. Then the number of breaths per minute rapidly diminishes, and, though with each the quantity of air respired increases, the delay soon becomes too long for life to be maintained. These phenomena are most simply explained on the assumption that, under the action of colchicine, the respiratory centre becomes by degrees less excitable, so that the irritation due to venosity of the blood must be more and more accumulated to set in motion the breathing apparatus. The ascending paralysis of the nerve centres attacks in its progress the convulsion centre, and to this cause must probably be referred the fact that the highly venous blood does not, as a rule, produce suffocation convulsions.

George Dale, M.B.

Article 396.

WILSON ON THE HYDERABAD CHLOROFORM COMMISSION.

In the *Medical Chronicle*, for April, 1890, Mr. Alexander Wilson publishes some notes on the Report of the Second Hyderabad Chloroform Commission. He observes that the Commission have come to the conclusion similar to that arrived at by Mr. Wakley in 1848, and the Commission of the Society of Emulation of Paris, 1852, viz.: in death from chloroform, the heart continues to beat after respiration has ceased, results in contradiction to the previous London Commission of 1864, and the Glasgow Commission of 1874. The author points out that there may be several objections taken to the unreserved application of the conclusions of these experiments to man. There is the difference which may exist in the action of chloroform on the heart of man and animals. The condition of the vagus centre is of great importance in relation to chloroform narcosis. It is possible that the habits of life, the taking of stimulants and narcotics, especially the habitual use of drugs, like tobacco, may have some effect, if not in altering the behaviour of the heart, muscles, or its innervation, at least in modifying the chain of events on which depends the absorption and distribution of chloroform by the blood. Other points of difference between man and the animals experimented on, are the relation of the vital capacity to the size of the animal, and the interference with complete filling of the lungs resulting from holding the animal. It has often been shown that the suddenly fatal cases are rare in the human subject, when there is any impediment to the free expansion of the chest, preventing the lungs taking in the necessary fatal dose. The greater number of the suddenly fatal cases occur in healthy people with large vital capacity, especially in operations like teeth extraction, with the patient in the upright position, when full play is given to the respiratory muscles. It is, therefore, possible that holding a struggling animal might so interfere with its breathing as to prevent the full dose being taken; and there is an indication in the reports that holding the animal did, in some cases, interfere with its respiration. The conditions under which supposed cardiac paralysis occur in man are difficult to obtain in animals. There is the voluntary deep inhalation at first, then, during struggling, the patient gives one or two deep inspirations, and so obtains the maximum amount of chloroform. The means by which the movements of the heart were tested are of some moment. Most of the cases were tested by a needle introduced into the heart, or by opening the chest. It would be interesting to know the degree of action exhibited by the heart after cessation of the respiration. Was the power of propelling the blood retained? If the action consisted only of muscular tremors, it would be of little value.

In the second portion of the report it is shown that the essential action of chloroform on the system is to cause a fall in the mean blood pressure. This fall is proportionate to the amount of chloroform inhaled and absorbed into the system. The cause of this fall is assigned to paralysis of the vaso-motor centre (sec. 19). This exposes a comparatively new and insidious danger in chloroform administration, and one as difficult to treat as the old cardiac syncope. It is quite conceivable that, under certain circumstances, the dose necessary to irretrievably damage the vaso-motor centre may be inhaled with extreme rapidity, and that, while the respiration and pulse are still present, the centre may be almost paralysed before much warning is given. In the Commission experiments injection of chloroform into the jugular vein caused no paralysis of the heart. This experiment, when compared with inhalation, is open to criticism. Chloroform given by inhalation is much more likely to reach the heart in large doses, since the blood saturated with chloroform goes direct into the left auricle and ventricle, and thence to the coronary arteries. The attempts to produce shock during chloroform administration failed; but, in experimenting on animals, there are several sources of error, such as absence of mental terror, and the depressing effect of the anticipation of the operation.

Apart from any action which chloroform may have on the heart itself, the experiments made supply abundant reason for a careful observation of the pulse during administration, and it is surprising that this point has not been referred to in the Practical Conclusions. It is shown in the report that the "intake" of chloroform depends on the respiration, but that the effect of this "intake"—the way in which it is utilised—depends on the force and rapidity of the pulse. It is shown that, with a slow pulse, concentrated chloroform vapour can be given with impunity, but with a full bounding pulse dilute chloroform vapour may be dangerous.

The results of the latest Commission on chloroform may be summed up thus:—To the question whether chloroform causes paralysis of the heart, nothing new has been added. Because the Commission did not obtain it in 600 attempts, they conclude it does not exist, but the bulk of their work was not upon the lines which were most likely to conduce to this result, viz.: those of deep inspiration after semi-asphyxia; and in ordinary experience the several conditions giving a fatal result are combined only about once in two or three thousand cases. We are indebted to the Commission for the knowledge of the importance played by vaso-motor paralysis in the causation of death, and the fact that the paralysis of the respiratory centre may be final at the moment that attention is drawn to the cessation of respiration. The work of the Commission gives us no greater confidence in chloroform than we had before.

J. B. Ball, M.D.

Article 397.

AMERICAN VIEWS ON SUSPENSION IN LOCOMOTOR ATAXY.*

The fashion of suspension appears to be dying out. In our own country, the experiments of Russell and Taylor, at the National Hospital for Paralysis, have not afforded much encouragement to the practice. Nor was the position of its advocates strengthened by the recent discussion at the Medico-Chirurgical Society. Dr. Cagney upset the stretching theory by proving that suspension straightens the curves of the spinal column, and thus produces a total shortening of the canal. The dangers and discomforts of the method have been pointed out again and again. It is satisfactory to note that the whole question will shortly be discussed before the Neurological Society. Meanwhile, it is of interest to know what views are taken upon the matter in America. Two sources have been selected, both of the outspoken nature characteristic of Transatlantic journalism.

The *New York Medical Journal* says that since Charcot adopted the suspension treatment of tabes, according to the method of Mutchutkowsky, every neurologist in Christendom has experimented and written on the subject. As often happens with remedies for incurable diseases, it has benefited some patients, had no effect whatever upon others, whilst a few have been seriously, or even fatally, injured. A large number of stretching devices have been thrown upon the market, from a modification of the mediæval inquisitorial rack, by a Vienna physician, to the comparatively simple gibbet of Sayre. In many office corners the latter stands idly—a mute monument to buried therapeutical hopes.

Suspension, although a passing fashion, has emphasised the fact that mere mechanical manipulation of the containing canal may do good in diseases of the spinal cord. Half a century back, Branting used massage while the patient was hanging from a bar. Other species of friction and vibration have been applied in various parts of Europe. More than fifteen years ago, Hessing supported and extended the spine continuously by means of an accurately-fitted corset. This method is reported to have produced as much improvement as any other mechanical means in the treatment of locomotor ataxy. A common, and as yet undetermined, principle probably underlies all these systems. Release of nervous elements from pressure by stretching of sclerotic tissues, and improved circulation in blood and lymph channels, are among the hypotheses that have been advanced in explanation. In conclusion, it is remarked that, as some cases benefit under any of the plans mentioned, and all agree in the fundamental object of extending the spine, it would be well to abandon dangerous and complicated methods in favour of simple ones, such as hanging from horizontal bars, bending over to touch the toes while the legs are straight, and the use of gymnastic exercises that rotate the spinal column.

The editor of the *New York Analectic and Epitome*, himself a neurologist, states in a foot note that he has from the first taken a firm stand against the suspension treatment. Its literature has been inserted merely to warn readers against what is termed "an unscientific, quackish, and dangerous therapeutic procedure." He claims that Cagney, by proving that suspension shortens instead of stretching the spinal canal, "has pricked almost the last bladder of this foreign echinococcus, which our aping ways have so long allowed to prey upon our scientific vitals. The details of broken necks, strangled throats, dislocated spines, inhibited hearts, ruptured vessels, and, worse still, quackishly-depleted pocket books of patients, would already fill a book. The editor is proud to say that, while his claims to the title of neurologist are small, they have never been detracted from by suspending, or allowing to be suspended, one single patient of his, suffering from locomotor ataxy, or any other incurable disease."

David Walsh.

Anatomy and Physiology.

RECENT PAPERS.

398. Bekhtereff, Vladimir M., and Mislavsky, Nikolai A., Professors.—A Contribution to our Knowledge of Innervation of the Stomach. (*Meditzinskoie Obozrenie*, No. 2, 1890, p. 185.)

399. Grzüdeff, Dr. Serghêi S.—On the Influence of Russian Bath on the Assimilation and Metabolism of Calcium, Magnesium, Potassium, Sodium, and Iron in Healthy Subjects. (*Vratch.*, No. 9, 1890, p. 205.)

400. Jankowski, Dr. Danil N.—On a Contribution to the Question on the Effects of Hot Water Injections into the Intestines. (*St. Petersburg Inaugural Dissertation*, p. 91, 1890.)

401. Antonelli, A.—Contributo allo Studio del Significato Morfologico e della Struttura del Ganglio Ciliare. (*Giornale della Associazione dei Naturalisti e Medici di Napoli*, I, 1890, 3.)

402. Goldscheider, A.—On Investigations into the Muscular Sense. (*Arch. f. Anat. und Physiol.*)

Art. 398. *Bekhtereff and Mislavsky on Innervation of the Stomach.*—In the *Meditzinskoie Obozrenie*, No. 2, 1890, p. 185, Professors Vladimir M. Bekhtereff and Nikolai A. Mislavsky, of Kazan, publish an important series of elaborate experiments on dogs, which they have undertaken to elucidate:—(*a*) The character of normal movements of the stomach; (*b*) the influence of the central nervous system on the gastric action; and (*c*) ditto of peripheral nerves. The outcome of the authors' researches may be summed up as follows:—1. Normal movements of the

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* Editorial, *New York Medical Journal*, March 8, 1890. Editorial note, *Medical Analectic and Epitome* (New York. March. 1890).

stomach attain their maximum intensity during the gastric digestion, that is, when the organ is filled up with food masses. When the organ is empty, its movements not unfrequently cease altogether. 2. Given an active period, there are usually observed more or less strong rhythmic contractions of the pyloric portion of the organ, which occur at a fairly regular rate. The cardiac portion of the stomach may frequently remain at rest. It commences to perform periodic contractions only when the active period reaches its height, the contractions being more slow in comparison with the pyloric ones. They are not strictly synchronous with the latter; not unfrequently the movements of the cardia coincide with relaxation of the pylorus, and relaxation of the cardia with pyloric contractions. 3. At the height of the gastric action, there are observed, in addition, fairly strong general contractions of the gastric walls, running from the cardia towards the pylorus. They may sometimes occur even in such cases where the pyloric contractions are weak or absent altogether. 4. The pyloric movements are mainly depending upon a peripheral or local nerve apparatus, since they may still occur even after both of the vagi and the cervical portion of the spinal cord have been divided. 5. They are, however, kept up and even excited by the agency of the vagi, since division of the latter alone may prove sufficient to cause a complete cessation, or at least a more or less considerable weakening, of the rhythmic movements. 6. On the other hand, destruction of certain portions of the central nervous system (*e.g.*, corpus quadrigeminum) similarly gives rise to a more or less prolonged stoppage of the pyloric contractions, which, however, after some while, regain their former intensity. 7. Stimulation of the vagi is invariably followed by very strong and accelerated rhythmic contractions of the pyloric region. Irritation of the right pneumogastric nerve always produces more pronounced effects than that of the left one. 8. Stimulation of the vagi never brings about a continuous constriction of the region; hence the supposition is justified that the nerves act on the region through stimulating a local perpiheral nerve apparatus. 9. As regards the cardia, strong electric and even mechanical stimulations of the vagi invariably produce a general contraction and constriction of the region;. while a slight electric irritation gives rise to a more or less marked dilatation of the part, the pylorus showing no changes at the time. [In other words, the authors confirm Openkhovsky's observations, according to which the vagi contain cardio-dilating fibres.] 10. When the stomach is empty (and at rest; *vide Sub* 1), stimulation of the vagi manifests a by far weaker influence on the organ than during the period of digestion. 11. An increased frequency of the pyloric rhythmic contractions is also observed on electric stimulation of the medulla oblongata. 12. Stimulation of the splanchnic nerves invariably completely arrests the pyloric movements (that is, the nerves contain special pyloro-inhibitory fibres, as Openkhovsky has shown), and at the same time induces a prolonged, though weak, single contraction of the organ, spreading from the cardia to the pylorus. 13. The same effects are also obtained from stimulating the spinal cord (its upper part), medulla oblongata, cerebral pedunculi, and anterior segment of the optic thalamus. The latter contains special centres inhibiting the pyloric movements. 14. Stimulation of the sigmoid gyrus (especially of its postero-external, but partly also of the anterior, portion) increases the pyloric contractions, the increase being often accompanied by a general constriction of the region, and followed by some decrease, or even temporary complete arrest of the movements. Now and then the same effects may be also obtained from stimulating the second gyrus, in the neighbourhood of the sigmoid, and the third or fourth ones, between the upper end of the Sylvian fissure and postero-external division of the sigmoid gyrus. 15. Stimulation of the anterior part of the sigmoid gyrus, and sometimes of the outer end of the cruciate one, as well as of the posterior division of the sigmoid and adjacent part of the second primary gyrus, gives rise to a more or less prolonged retardation, or a complete inhibition of the pyloric contractions, accompanied by a general constriction of the region, and followed by increased movements. 16. Stimulation of the antero-external division of the sigmoid gyrus may occasionally give rise to contractions of the cardia without producing any changes about the pylorus; while irritation of the posterior end of the same gyrus may sometimes call forth contractions of the cardia, accompanied by increased pyloric movements. 17.. As to a reflex influence of peripheral stimulation, it has usually an inhibitory character. With regard to the energy of the action, the peritoneal coat of the intestines and the peritoneum in general must be placed foremost. Even a slightest stimulation of the parts, such as a gentle stroking with a finger, very rapidly brings about a total and more or less prolonged arrest of all pyloric movements. Similarly, any cutaneous stimulation (pathic or thermic) gives rise to a temporary decrease or stoppage of all gastric contractions. The same holds true in regard to rhythmic contractions of the small bowel. 18. Stimulation of the central end of a divided vagus produces a temporary arrest of the pyloric rhythmic movements, accompanied by a general contraction of the gastric fundus, and a quite distinct dilatation of the cardia.

399. *Grüzdeff on the Influence of Russian Bath on the Assimilation and Metabolism of Calcium, Magnesium, Potassium, Sodium and Iron in Healthy Subjects.* — Dr. Serghëi S. Grüzdeff, of St. Petersburg, describes an interesting series of investigations which he has carried out in Professor V. S. Manasseïn's clinic, in order to throw some light on the still obscure systemic functions in question. The experiments were conducted on eight healthy men (including the author himself), aged from 21 to 44. Each observation lasted 10 days, during five of which a Russian bath of one hour's duration was taken once daily. The diet consisted of bread, butcher's meat, milk, and tea with sugar. The following are the main corollaries, drawn from the researches:—1. Russian bath invariably increases the assimilation of calcium, magnesium, sodium, and iron, but depresses that of potassium. 2. It manifests a diametrically opposite influence on the metabolism of the metals; that is, it decreases the metamorphosis of calcium, magnesium, sodium, and iron, but markedly augments that of potassium. 3. In other words, the bath promotes the retention of calcium, magnesium, sodium and iron within the system, while it—*sit venia verbo*—expels potassium from the organism. 4. In view of the facts, Russian bath may find a useful application in the treatment of the so-called "mineral starvation."

400. *Jankowski on the Effects of Hot Enemata.*—Dr. Danil N. Jankowski, of St. Petersburg, contributes a monograph on the physiological action of large hot enemata, the work being based mainly on his own

experimental researches in Professor I. T. Tchüdnovsky's clinic. In all, ten experiments were carried out on as many healthy young men, aged from 21 to 24, each observation lasting from 10 to 15 days, during which an enema was given once daily. The injection was made of 750 grammes of water at 42° or 43° C., and administered by means of Hegar's funnel. The fluid was expelled back by the patient in from three to 32 minutes, on an average in about eight, the quantity retained in the bowels oscillating between 50 and 290 grammes, and amounting, on an average, to $155\frac{1}{8}$ grammes. The following are the main results derived from Dr. Jankowski's careful and laborious investigations:—1. Under the influence of the enemata, the patient's bodily weight invariably falls, the total diminution, for five enema days, varying, in individual cases, from 220 to 1,540 grammes, and on an average amounting to 845·2. The daily quantity of urine increases, the surplus oscillating between $992\frac{3}{8}$ and $289\frac{1}{5}$ grammes, and averaging $706\frac{7}{40}$. 3. The specific gravity and acidity of urine are augmented. 4. The daily quantity of water lost through the skin and lungs decreases, though the total amount of water lost through the kidneys, skin, and lungs increases. The relation between the amount of urine and that of cutaneous and pulmonary losses undergoes a marked alteration: while under normal conditions the former is usually lesser than the latter, under the influence of hot rectal injections the daily quantity of the renal water exceeds that of the cutaneous and pulmonary one. 5. The daily quantity of fæces increases, while its density is diminished. In other words, the quantity of water eliminated from the system through the intestinal tract is also augmented. 6. Immediately after an injection, the frequency of the pulse rises from four to 12 beats in one minute. In 10 minutes it somewhat lessens, but still temporarily remains at a higher level, comparatively with the preceding period. 7. The arterial tension, measured on the radial artery, similarly rises from 18 to 25 millimetres. About 15 minutes after the enema has been returned, the blood pressure ascends still further, to keep at the level for 15 minutes. 8. The pulse curve undergoes a considerable alteration, which points to increased energy of cardiac contractions, arterial tension, and tone of peripheral vessels. 9. Respiration slightly quickens 10. In 15 minutes after an injection, the axillary temperature rises from 0·1° to 0·4° C., to return to the standard in another 15 minutes. The cutaneous temperature about the hepatic region similarly increases from 0·1° to 0·6° C., to fall somewhat below the normal in 30 minutes after an injection. 11. The facts sketched above unmistakably point out that hot enemata markedly stimulate the heart, and modify the distribution of blood in the system. 12. The enemata may be resorted to in certain cases as a good stimulative means. VALERIUS IDELSON, M.D.

401. *Antonelli on the Morphology and Structure of the Ciliary Ganglion.*—In the author's view, the ciliary ganglion is homologous with a special ganglion, and the oculomotorius with a spinal nerve, for the following reasons:—1. The ganglion in the root or stem of the third pair of nerves in many invertebrates corresponds to the ciliary ganglion of higher (vertebrate) animals. 2. The accessory ciliary ganglia belong to the oculomotorius, and are, therefore, homologous with aberrent spinal ganglia. 3. In man there is occasionally an accessory ciliary ganglion, in the short root of the ciliary ganglion. A short distance from this cell-mass the real ciliary ganglion begins as scattered cells in the motor or short root, being thus definitely connected with the oculomotorius. 4. The motor root of the ciliary ganglion in man, the rabbit, and birds contains the same fibres, as the root and stem of the oculomotor nerve (medullary fibres of very large transverse section). 5. The ultimate connection of the abducent nerve with the oculomotor can be conceived as evident, because sympathetic nerves course in the path of the abducens to reach the ciliary nerves, which would justify a separation, morphologically, of the abducens from the two other nerves to the muscles of the eye. The independence of the oculomotor would be more definite by classing it with the trochlear nerve, which also in lower vertebrates holds sensory fibres. The want of a nucleus to itself would then make the oculomotorius the homologue of a ventral root. 6. However the sympathetic may behave in the orbit, it can afford no argument against the attachment of the ciliary ganglion to the oculomotorius as the homologue of a spinal ganglion. 7. Whatever the connection of the ciliary ganglion with the oculomotorius may be, the deposit of ganglion cells in the fibres of the latter satisfactorily proves their relationship. 8. Numerous embryological and comparative anatomical facts indicate that not the slightest part of the ganglion belongs to the trigeminus. The trigeminal fibres do not form a true root of the ganglion, but merely course along the oculomotorius, or the ganglion, or the ciliary nerves, to the bulbus-oculi. Microscopical examination of the cells of the ciliary ganglion showed that they possessed completely the character of spinal ganglionic cells, being uni-polar like these, whereas the sympathetic ganglion-cells, apart from great pigmentation, and the presence almost always of two nuclei in each cell, are multi-polar.

402. *Goldscheider on Investigations into the Muscular Sense.*—These investigations were undertaken to establish analytically the sensory elements of the complex functions, subsumed under the name "muscular sense," and, further, to discover their substrata. The following functions were especially examined:—(1) The feeling for passive movements; (2) the feeling for active movements; (3) the perception of the disposition of the limbs; (4) the sensation of weight and resistance. In examining the feeling for *passive movements*, an effort was first made to obtain *limiting values*. Experiments were made on the joints of the left index finger, the wrist, elbow, shoulder, hip, knee, and ankle. The proximal part of the joint being fixed, the distal part was passively moved in such a way as to eliminate as completely as possible any excitation of the feeling of pressure in the skin, the part being enveloped in a caoutchouc sheath filled with water. The movements, which consisted in raising and lowering the part, were effected hydraulically. The moved part indicated its excursion in enlarged degree on a rotating cylinder, so that measurement of the abscissæ and ordinates gave the time and extent of the tracing. With maximal quietness, but without shaking, the following values were obtained for the *merklichwerden* of joint movements (*i.e.*, their degree before being noticed by the subject):—

The second interphalangeal joint	1·03	to	1·26°
The first „ „	0·72	„	1·05°
Metacarpo-phalangeal „	0·35	„	0·45°
Wrist joint	0·26	„	0·42°
Elbow „	0·40	„	0·61°
Shoulder joint	0·22	„	0·42°
Hip „	0·50	„	0·79°
Knee „	0·50	„	0·70°
Ankle „	1·15	„	1·30°

Variation of the rapidity showed that those joints which had a smaller excursion-angle required also less rapidity. A peculiar relation between the amount of movement and its rapidity existed, viz., as the excursion increased, the rapidity necessary for noticeability declined. The peculiar position whence movement began had no particular influence. The substratum of the capacity of feeling passive movements is to be sought in the deep joint sensibility. The author puts forth the theory that the perception starting in the joints, owing to movements of the limbs, gives us immediately the idea of being moved (bewegtwerden); that this is, therefore, a movement-perception of simple character, and is not merely a perception abstracted from the different primary, intermediate, and final positions of a limb, like the movement sensations of the retina.—(*Centralb, f. d. med. Wissench.*, No. 17, 1890.)

E. J. Edwardes, M.D.

Surgery.

RECENT PAPERS.

403. Verco, Dr. J. C.—On a Case of Diffuse Suppurative Periostitis of the Tibia, terminating in Recovery almost without Necrosis. (*Internat. Med. Congress*, p. 277.)

404. Sexton, Dr.—On a Case of Excision of entire Humerus: operation in the presence of Chorea Major. (*Med. and Surg. Reporter*, Philadelphia, March 29, 1890.)

405. Tillmanns, Dr.—On a Case of Extensive Resection of the Chest-wall with Exposure of the Pleura. (*Deut. Med. Zeit.*, April 17, 1890.)

406. Classen, Dr. F. L.—On Pyæmia as a Sequel to Gonorrhœa. (*Albany Med. Ann.*, March, 1890.)

407. Terrillon, Dr. M.—On a Case of Trephining the Skull for Traumatic Cephalagia of Ten Months' duration. (*L'Union Med.*, April 29, 1890.)

408. Thiriar, Dr. J.—On a Case of Large Fibrolipoma of the Peri-renal Tissue. Excision; Nephrectomy, Recovery. (*La Clinique*, April 17, 1890.)

Art. 403. *Verco on a Case of Diffuse Suppurative Periostitis of the Tibia, terminating almost without Necrosis.*—A boy, aged eight years of age, was admitted, under Dr. Verco's care, a fortnight after being attacked by pains in the left ankle. An incision had been made in the leg a week previously, and the tibia found to be bare. When first seen by Dr.V., on Sept. 27, there were three incisions along the front of the left tibia—one just above the ankle, a second in the middle of the leg, and a third a little below the tibial tuberosity—varying from one to two inches in length, the higher ones being the larger, and gaping widely. A drainage tube passed from the upper wound by the inner side of the tibia, through an incision in the calf; while a fifth incision in the back of the leg, in the lower part, corresponded to the lowest one in front. After the blood-clot had been removed by poultices and suppuration, the tibia was plainly seen in all three anterior wounds quite white and bare, and insensitive to the probe, which could be passed along the bone from one wound to the other. By Oct. 15th, the lower incision at the back of the leg had spontaneously closed, and the lower one on the anterior aspect. On Nov. 23rd, as the drainage tube was quite blocked, it was removed with some difficulty, and found it occluded by a piece of granulation tissue, almost cartilaginous in consistence, and containing minute bony spiculæ. At the time, it was supposed to be derived from the periosteum. It was then tried, with directors introduced into the two front incisions, to move the tibia; but it appeared firm, though quite bare, white, and insensitive. Nov. 1st.—The incision over the front of the middle of the tibia had gradually closed up and epitheliated, and the bone in the upper wound was noticed to be of a pink colour, as though blood-stained; and when a director was pressed upon it, instead of being hard and dense, it was softened somewhat, and allowed the point to crush into it. There were no granulations on it. Nov. 15th.—The previously bare bone was completely covered by granulations springing from its surface, large and firm. The appearance was entirely different from that presented by granulations gradually extending inwards from the margins of a wound, and covering over, but not adhering to, a dead bone. These evidently sprang up *in situ;* nor could the probe be made to touch bare bone anywhere. Nov. 28th.—The granulations were large and irregular; no space could be detected between the margins of the wound and the bone. [Mr. Smith alludes to similar cases in the *Medical Times and Gazette*, June, 1855, p. 552, *vide* "Med. Digest.," Sec. 101: 6.]

Richard Neale, M.D.

404. *Sexton on a Case of Excision of entire Humerus.*—The author describes a case of unusual interest, not only on account of the history of the case and the nature of the operation, but also of a rare complication. A boy of ten injured his shoulder by a fall on the ice in February, 1888. Abscess followed, which pointed below the deltoid, and left a sinus leading to necrosed bone. The patient came under Dr. Sexton's observation four months after the accident. There was then marked bone disease up to and involving the head of the humerus. About the shoulder and half way down the arm the structures were all infiltrated. The humerus itself seemed enlarged at the middle third, as if by callus, but there was no history of fracture. The boy's septicæmic condition and the excessive heat of the season contra-indicated operation further than to excise and drain tissues near the joint. His general health improved upon tonics until October first, when twitching and jerking movements of the hand and arm were noticed. These movements became more violent and painful, and by the 29th had involved almost every movable part of the body in a severe chorea. The face wore an expression of imbecility, and the patient was rapidly sinking from exhaustion. After consultation, it was decided to operate, with the idea that not much good would be likely to result from treating the chorea—whether reflex or otherwise—with the arm in its present condition. With the intention of excising the head, and as much of the shaft as might be diseased, a downward incision, six inches in length, was made from the tip of the acromion. The head of the bone was thrust out of the wound, and the shaft sawn through about its middle. The bone below that point was evidently diseased, so that the incision was prolonged to the radial condyle, the elbow joint opened, and the entire humerus removed. The wound healed well under antiseptic treatment. The chorea ceased, of course, under the anæsthetic, and returned about three hours after the patient's awaking, but not violently, nor did

it cause any pain. Ten days afterwards the chorea was well, and in thirty days the boy began to use his arm. Four months after the operation the report showed perfect health: no chorea; wound united; no signs of bony growth. Measurement gave two inches of shortening to the affected arm, with greater circumference than on sound side: motion of fingers perfect; "can lift to a good advantage," and carry a burden; can dress himself; no muscular atrophy. The author observes that he cannot find a single recorded instance of grave operation in the presence of chorea. Many minor operations, such as removal of foreign bodies, or division of nerves, are reported. He is inclined to trace the disease rather to the debility consequent on long-continued suppuration than to reflex irritation. On the other hand, the history of the case undoubtedly follows the rules supposed to demonstrate reflex chorea. It began in, and was confined to, the arm; and it must be confessed that the anæsthetic, the shock of operation, and the removal of local disease, exerted a promptly curative effect upon the nervous phenomena. The operation of excision of the entire humerus is rare. This probably results from the fact that—1. Any lesion calling for removal of the entire bone generally comes within indications for amputation at the shoulder-joint. 2. Mortality after amputation is less after excision of the head with any considerable part of the shaft of the bone. 3. Because it has been held that a flail-like arm is of no use whatever, and rather an encumbrance than otherwise. On the other hand, it may be urged that there may be bony regeneration of considerable amount; that the preservation of the outline and form of the member is more sightly than an empty sleeve; that, on account of the shortening, thickening, and consequent strengthening of the muscular tissues, no little degree of leverage will be preserved, and much valuable power of fingers, hand, and wrist be retained.

David Walsh, M.D.

405. *Tillmanns on a Case of Extensive Resection of the Chest-wall with Exposure of the Pleura.* (*Congress of the Deut. Gesellschaft für Chirurgie.*, Berlin, April 12, 1890).—Tillmanns, of Leipzic, related the following case:—The patient had extensive tuberculosis of the lungs and pleura, with extensive emphysema, and was much reduced. He was operated on in 1888, after having been two years in bed. Resection of the ribs had twice been done before this. The left lung was quite incapable of function; the right was still sound throughout. Tillmanns removed the whole anterior wall of the thorax, which was riddled by many fistulas; the pleura was energetically scraped away; and, after some days, the skin still present was transplanted on to the lung. Good recovery. It is interesting to note that the tuberculosis of the left lung is quite healed. The patient has been able to follow his business for two years.

G. D'Arcy Adams, M.D.

406. *Classen on Pyæmia as a Sequel to Gonorrhœa.*—The following notes are given of a case bearing the above title:—A man, aged 32, came under treatment for gonorrhœa. Nothing was given to arrest the discharge, but the patient was treated antiphlogistically [no mention made of antiphlogistics]. At the end of a week the author was called to the patient, and found him to be suffering from these symptoms: headache, pains in wrists and finger joints, and sterno-clavicular articulations. Temperature 102°; discharge from urethra stopped. The case was diagnosed as one of gonorrhœal rheumatism, and the salicylates and potassium iodide prescribed. For two weeks the patient improved; the temperature fell to normal, and in other respects he was doing well At the beginning of the third week, however, the aspect of the case changed; recurrent rigors set in, with profuse sweats, great thirst, hurried respiration, anorexia. Temperature ranged from 104° to 106°, with but slight remissions. The symptoms continued to increase in severity, and at the end of the fourth week the patient was dead. There was no *post-mortem.* The urethral discharge reappeared three days before death.

407. *Terrillon on a Case of Trephining the Skull for Traumatic Cephalagia of Ten Months' duration.*—The author read the notes of this case before a recent meeting of the Surgical Society in Paris. The patient was an officer in the Hussars, who received one day a violent blow upon his helmet; this caused a severe contusion, but there was no wound. Not long afterwards giddiness and pains in the head supervened. At the end of six months the pains became continuous, with exacerbations, especially localised to the upper part of the left side of the frontal bone. The patient could not sleep at nights, and he began rapidly to lose flesh. Various drugs were tried, but without avail. Incisions into the integument over the painful spot were tried, also without result. At last trephining was performed by the author. The bone was found extremely thickened, probably from osteitis. The dura mater was healthy, and an incision into it showed that there was no lesion underneath. The recovery was rapid, and the pains disappeared; and up to the time of the publication of the notes there had been no recurrence of the trouble.

H. Percy Dunn.

408. *Thiriar on a Case of Large Fibro-lipoma of the Peri-renal Tissue. Excision; Nephrectomy, Cure.*—Prefacing the notes of this interesting case by remarking on the difficulty of the differential diagnosis between ovarian cysts and renal tumours, the author states that, for two reasons, the case in question is worthy of note—first, because of the size of the tumour; secondly, on account of the extreme rarity of such a growth, and the rapidity of recovery after its removal, complicated though it was with nephrectomy. The tumour weighed eleven kilogrammes and a half; it had its origin in the cellulo-adiposal capsule of the right kidney of a woman, aged 63 years. The author at first believed the swelling to be a multilocular cyst of the right ovary. The patient had given birth to eight children; menses commenced at 15, and terminated at 50. The enlargement of the abdomen was only of six months' duration, and the swelling was first noticed on the left side. General health good; all organs apparently healthy; a small lipoma was situated on the right frontal region; the belly was about the size of that at the end of pregnancy, the enlargement being more prominent on the right than the left side. The integument was normal, the umbilicus somewhat protruded. On palpation, the tumour was round, flabby, nodular, semi-fluctuating, very mobile, occupying the whole of the lower part of the abdominal cavity, extending upwards as far as the epigastric region, and passing backwards to the right flank, which was dull to percussion. In the iliac fossa and the left flank the percussion note was much higher. The left side of the pelvis was apparently free, and the uterus had no influence upon the movements of the tumour. Under the belief that the case was one of right ovarian multilocular cyst,

the author proceeded to perform ovariotomy. The operation lasted one hour. The incision through the parietes of the abdomen showed that the growth was probably of sub-peritoneal origin. Further examination with the hand revealed the fact, that there were scarcely any adhesions. With a sharp scalpel, the author divided the serous covering of the growth, and then he proceeded to shell the latter out—a procedure which was easily done, and without any notable loss of blood. The left part of the growth was first attacked; the right ureter was too much incorporated with the growth to allow of its being separated. The author, therefore, divided the ureter between two ligatures, as a preliminary proceeding to removing the right kidney later on. The shelling out of the growth was still pursued; gradually the author reached the right lumbar region and the most posterior parts of the abdomen. Upon the vertebral column he could easily feel with his fingers the pulsations of the abdominal aorta; in the right iliac fossa he came upon a lipoma the size of a thumb, perfectly distinct from the large growth, and taking its origin from the surrounding peritoneal covering; this smaller growth he subsequently removed. Turning next to the kidney, which was only slightly adherent to the mass, he placed two ligatures upon the hilum of the organ, and removed it. This done, there was left an enormous cavity, the walls of which were formed by the peritoneum, and at the bottom of which one could see the vena cava inferior, the aorta and its two bifurcating branches and the muscles forming the posterior wall of the abdomen. This cavity was bounded above by the liver and diaphragm, below by the crural arch; on the left, under the peritoneum, constituting the wall of the sac, one could see the cæcum and ascending colon. The author carefully washed out the cavity, and passed a large drain through the lumbar region, subsequently bringing the peritoneal surfaces of the wound together with sutures, he closed the abdominal wound completely. Injections of ether and some champagne was required to restore the patient after the operation. The woman made a perfect recovery, and in fifteen days' time she was up and about. On microscopical examination, the growth was found to be a fibro-lipoma. The right kidney was healthy.

Medicine.

RECENT CASES.

409. Drecker.—On a Case of Lipuria. (*Deutsche Med. Zeitung*, April 7, 1890.)

410. Seifert.—On Thomsen's Disease. (*Deut. Med. Zeit.* Feb. 24, 1890.)

411. Erb.—On Thomsen's Disease. (*Deut. Med. Zeit.*, Feb. 24, 1890.)

412. Bancroft, Dr. Joseph.—On Filariæ. (*Transactions of the International Medical Congress*, 1889, p. 49.)

413. Delepine, Mr. M.B.—On Influenza. (*The Practitioner*, p. 257, April, 1890.)

414. Wood, Dr. Percy Moore.—On Beri-Beri as seen in the Northern Territory of South Australia. (Transactions of the *International Med. Congress* of Australasia, 1887, p. 55.)

415. Schichhardt, Dr.—On a Peculiar Case of Atrophy of the Liver. (*Münchener Med. Wochenschr.*, No. 44, 1889.)

416. Dorfler, Dr.—On a Contribution to the Ætiology of Acute Yellow Atrophy of the Liver. (*Ibid.*, No. 50.)

Art. 409. *Drecker on a Case of Lipuria.*—Josephine Küper, 2 years and 4 months old, is a weak child of strong, healthy parents. In October of last year she was ill with symptoms of lung and stomach catarrh. After three weeks she appeared well again. About the 10th of February of this year she again began to ail, and Dr. Drecker was called in, as the face began to swell. She appeared heavy, slept much, and was very thirsty. The skin was mostly dry, cool, and, on the upper arms, finely desquamating. The perspiration had an unpleasant smell. The pulse was small and slow; heart and lungs apparently sound. The tongue was furred, and the appetite bad; there was often vomiting, and five and six times daily white, pap-like stools, with dark streaks. The belly being distended by ascitic fluid, the limits of the spleen and liver could not be made out. The region of the kidneys was painful to pressure. Arms and legs were not swollen. The quantity of the urine was small, compared with the amount taken. It was clear in colour, but on its surface floated a layer of butter-like substance, which, on the application of gentle heat, appeared as ordinary fluid fat. The urine then became milky, and resembled thin meat broth with fat floating on it. It had a peculiar aromatic odour, not in the least like that of urine, appearing on heating. A drop on blotting-paper made a greasy mark, which did not disappear on drying. Heated in a test tube, it gave the characteristic pungent smell of acrolein. The butter-like substance dissolved completely in ether and chloroform. Heated with liq. potassæ for some time, it was entirely saponified. It was thus proved to be fat. The quantity present was 4·35 grammes in 100 centimetres. No trace of albumen was found on repeated examination. The child had taken no fat-containing medicament, nor had she suffered, from anything which could be considered as cause of this condition. It was not impossible to assume that she had scarlet fever, which had run its course with little rash and without being recognized by the parents. The desquamation of the skin on the arms pointed to this. External causes, as bad, damp dwelling, or improper nourishment, could not be blamed for it.

410. *Seifert on Thomsen's Disease.*—Seifert showed a patient presenting the typical picture of Thomsen's disease. The patient was 25 years of age, carver by trade. Parents healthy, has a brother suffering from the same affection. In both brothers it began in early childhood. The patient remembers to have had a certain difficulty in many muscle actions. If the movement was repeated several times, the helplessness was lost and the action was promptly performed. With the exception of this muscular helplessness, the patient is in every respect healthy. Long rest and cold (winter) fatigue and psychical affections (fright) increase the difficulty of movement. A false step at once causes a fall and general cramp of the whole muscular system. State: a powerful man, muscles very well developed, especially buttocks and lower extremities. Sensation, skin and tendon reflexes normal. The muscular power in comparison with the hypertrophy much depressed. Especially striking was the myotonic disturbance on shutting the eyes. Once shut they could only be opened again by great expenditure of strength. The leg powerfully

extended remains stiff for 20 seconds, and for that time is incapable of movement. This contraction is lost after several repeated movements and extensions, so that the leg can then move normally. The mechanical excitability of the motor nerves is not increased, in comparison with that of the muscles, especially with strong irritation. After a smart blow with the percussion hammer on the larger muscles, especially on the buttocks, thigh, calf, less clearly on the arm, follows a slow, tonic contraction (dimple-forming), lasting some time (up to 20 seconds). The electrical irritability of the motor nerves is normal. The faradic and galvanic irritability of the muscles is altered quantitatively and qualitatively. With strong galvanic and faradic irritations the contractions are slow, tonic and lasting. With the steady action of the faradic current on the larger muscles irregular, undulating contractions. With strong galvanic currents (16-20 M.A.), rhythmical contractions from Ka. to An. Examination of a bit of muscular tissue taken from the biceps showed (1) Enormous hypertrophy of the muscular fibres; (2) great increase of nuclei; (3) partial indistinct transverse striation (no vacuoli, however); (4) slight connective tissue proliferation.

411. *Erb on Thomsen's Disease.*—Erb also gave particulars of five cases recently observed by him. In the three first the disease was hereditary. In three or four of the preceding generation. The three individuals (two women and one man) are poorly developed, bodily and mentally, while single muscles are remarkably developed. The muscles display the picture of myotonic disturbances of movement with small motor power in a striking way. Case 4 also was hereditary (four sisters similarly affected, and many cases of neuropathy in the family). This patient was muscularly athletic in spite of diminished strength. Case 5 was of herculean build, of a healthy family, is a cyclist, climber of mountains, swimmer, &c. He had, however, relatively lessened motor power, typical myotonic disturbance, &c. All the myotonic reactions (mechanical, faradic, galvanic excitability of the motor nerves in affected muscles), described by Erb on Thomsen's disease were clearly shown, especially the dimples and furrow-forming on direct irritation, the long duration of the contractions, &c. Also the rhythmical undulatory contractions (missed by all authors except Seifert) with the steady action of this galvanic current. But also in the cases shown by Seifert these rhythmical contractions could be very well shown, so that in seven cases in all they had not failed to be present. Erb, therefore, looks on those contractions as a constant symptom of Thomsen's disease, and where they have not been found it has been due to the fact of the employment of too weak a current. G. D'Arcy Adams, M.D.

412. *Bancroft on Filariæ.*—Few things fill the mind with greater surprise than the discovery that the heart of the faithful dog is so filled with worms that his life cannot be expected to last long. On examining a drop of blood of a dog, we can ascertain by the presence of filariæ whether such is the case; and if we find it necessary to sacrifice our servant, we shall discover in the right side of the heart, and in the pulmonary artery, worms from four to ten inches long, more or less, interfering with the circulation of the blood, leading to dyspnœa, fatness, and dropsy. Filariæ, whose embryos float in the blood, may in all cases require the intervention of some blood-sucking creature to assist in their distribution—musquito, sand fly, louse, or flea, all of which will need to be examined. With regard to the dog, the study of which is very convenient, as he is always at hand, much information has yet to be got. In the blood of the dog's louse are found the embryos of filaria immitis. The dipteron stomoxys calcitrans also absorbs with the dog's blood the embryo worms. Of these, fifty-nine were once counted in one insect. The stomoxys fly, distended with blood, it is not difficult to capture on sunny walls. It may be distinguished from the common house fly by the set of its wings, more divergent posteriorly, and lying with their tips resting on the wall. When captured, the sharp, penetrating beak at once confirms its generic title. These flies are a great annoyance to horses in summer, gorging themselves with their blood; but Dr. Bancroft has never found filariæ taken up except in the instance referred to, and then the fly had been seen to feed on the dog. Dogs clean themselves of fleas and lice by biting, and so probably acquire the parasite; they frequently also snap at flies. Feeding experiments with various insects containing blood are, however, wanting to trace the life history of the parasite; and, from careful scrutiny, knowledge may be gained that would be of the greatest help in understanding what is wanting to arrive at the history of the human filaria. The embryo of filaria immitis has no sheath, and is more active than the embryo of filaria sanguinis hominis. In dissecting dogs known to have embryos in their blood, the portal circulation should be searched, in case the parent worms, not being found in the heart, are obstructed in their progress by the capillaries of the liver. When filaria immitis is extracted from the heart, and placed in a vessel of blood, or blood serum, it writhes about with a slow motion, and, as the coils rise above the level of the liquid, they appear pure white, as if greasy. A dead or injured worm rapidly becomes stained red. The worms have much rigidity while alive, and at times cause the death of their bearer by rupture of the ventricle when hunting. There is no history of the filaria of the dog living in the human subject. The resting place of the mature filaria in the human body is hard to determine. It is found in the lymphatics of the arm; there, dying probably from bruises or the excessive muscular action of the labourer, it forms an abscess, the structure involved becoming brawny and tumid. Rigors mostly occur. If the abscess is opened early, the parasite may be perceived, more or less broken and undergoing disintegration; the embryos, also dead, escaping from the ruptured ovarian tubes. The particulars of the discovery of the first parent filaria sanguinis hominis were published in the "Proceedings of the Pathological Society of London," in vol. xxix., A.D. 1878. In 1876, Dr. Bancroft discovered a worm in the contents of an abscess in a butcher boy's arm, which gave issue to many embryos, and subsequently in the fluid of an hydrocele. In 1886, Dr. Saboia discovered the nematoid in the right heart of a boy in Bahia. The fact that few cases of youths suffering from filaria in Brisbane are now to be found seems to show that the city water supply is purer than the well and tank water formerly used. The new cases presenting themselves in Brisbane are from country towns, where there is no public supply of drinking water. The adult parasite probably, by its presence in the lymphatics, blocks them up, either by its own bulk, or by the inflammation it may cause. If located in the heart and blood vessels, as in the Bahia case, thrombosis and embolism may happen. Little information is to hand on this point. When the parasites live in a hydrocele, no harm can follow. The patient,

whose hydrocele contained four worms, was not free from embryos in his blood for years after, showing that all the adult worms were not removed from his body.

413. *Délepine on Influenza.*—Dr. Délepine contributes a very able and interesting paper on the question whether influenza is a contagious or miasmatic disease. The conclusions arrived at by the author are that the disease is a contagious fever, which, when typical, has a very short latent period (twelve to twenty-four hours), an equally short initial stage leading to a fastigium lasting at most a few hours, followed by a sudden defervescence, taking the form of a crisis. Then a comparatively tedious convalescence begins, during which the patient continues to diffuse the contagion for about one week or perhaps a longer time. This of course refers only to uncomplicated cases.

414. *Wood on Beri-Beri as seen in the Northern Territory of South Australia.*—In this very interesting paper Dr. Wood gives the features of the disease as seen in Australia; and where the history, cause and symptoms differ in no way to those seen in other parts of the world, it is not necessary to reproduce his statements. In the question of treatment, however, there is one drug mentioned that appears to have rendered good service. and that is digitalis combined with iron. Dr. Berril was the first to suggest its use. As regards diet, fish, vegetables, especially English potatoes, and fresh meat are absolutely necessary.

RICHARD NEALE, M.D.

415. *Schichhardt on a Peculiar Case of Atrophy of the Liver.*—A working woman, aged 53, had suffered for more than a year with gastric trouble and constipation, with general lassitude. After some months gradual swelling and tension of the abdomen set in; diarrhœa came on, and the breathing became difficult. No icterus at any time. Soon œdema of the legs appeared. Over the apices of the lungs there was dulness, with intensified inspiratory and prolonged expiratory breathing. Free fluid in the abdomen, which a trial puncture showed to be yellowish-green, and rather turbid, but containing no "morphotic" elements except peritoneal endothelium. No tubercle bacilli were present. *Diagnosis:* Cirrhosis and infiltration of both apices, commencing intestinal tuberculosis, degeneration of the heart, ascites and anasarca. The patient died of exhaustion; the abdomen had been repeatedly tapped. *Autopsy:* The liver was reduced to a third of the normal volume, the surface was smooth, capsule thickened in places. The gall-bladder, the size of a man's fist, was strongly adhesive to the anterior hepatic border. It contained brownish-green viscid bile, mixed with numerous biliary concretions. Liver measurements: breadth, 19·5 centimetres; height of right lobe, 16 centimetres; of left, 10·5 centimetres; thickness, 3·7 centimetres; weight, 570 grammes (a little over lb.j). The anatomical diagnosis ran thus: Subacute atrophy of the liver; dilatation of gall-bladder with gall-stone. *Microscopically*: Numerous pigment granules were found in the centres of the acini, also capillary dilatations, appearances which are seen in red atrophy of the liver. Besides this, peculiar thickenings of the vascular walls pointed to complicating disease of the vessels, either primary or secondary, with hindered outflow to the acini. Apparently the atrophy was connected with endarteritis, a complication not hitherto described.

416. *Dörfler on a Contribution to the Ætiology of Acute Yellow Atrophy of the Liver.*—A woman, ætat 31, who had hitherto been apparently healthy except as to temporary pains over the liver, was taken ill with typical abdominal typhus (typhoid fever). After the disease had run a normal course for about four weeks, violent pains set in suddenly in the region of the liver and gall-bladder; these were set down to gallstone colic. Then followed a slight rigor with rise of rectal temperature to 41·6 deg. C., sopor, vomiting, and soon afterwards death from cardiac failure. At the autopsy, the liver was found of normal size, with icteric surface. Section showed complete disappearance of the acini; the staining was very irregular, some parts were dark red, some pale red, others again clear yellow. Microscopically, the liver cells were found exactly as in acute yellow atrophy. In the gall-bladder, which was strongly adherent to its surroundings, was found only a very fluid, dark green bile, and about 30 small gall-stones. The mouth of the cystic duct was quite closed by about 16 of these stones. The anatomical diagnosis ran: Abdominal typhus. Cured. Closure of cystic duct by gall-stones. Gall-stones in gall bladder. Acute yellow atrophy of liver. Icterus universalis. Hæmorrhages in gastric mucous membranes. Acute parenchymatous nephritis. Splenic enlargement. In the above case two points call for notice: first, the concurrence of typhoid fever with biliary colic; and second, the possible causal connection of the typhoid and the stagnation of bile with the acute yellow atrophy. It would seem that the liver, owing to the biliary stasis, afforded a more favourable condition for the typhoid bacilli, and thus may possibly have originated that still mysterious disease, acute yellow atrophy of the liver.

E. J. EDWARDES, M.D.

Pharmacology and Therapeutics.

RECENT PAPERS.

417. SHTCHERBAK, DR. ALEXANDR E.—A Contribution to our Knowledge of Antiepileptic Effects of Bromide of Gold. (*Vratch*, No. 9, 1890, p. 202.)

418. TZISVITZKY, DR. VICTOR L.—On the Physiological Action of Methylal: a Contribution to the Pharmacology of Methylal. (*St. Petersburg Inaugural Dissertation*, p. 146, 1889.)

419. PAVLOFF, DR. KONSTANTIN L. — A Contribution to the Pharmacology of Hydrochlorate of Hyoscine. (*St. Petersburg Inaugural Dissertation*, 1890, p. 149.)

420. MATZKEVITCH, DR. VASILY, G.—A Contribution to the Question on the Influence of a Free Ingestion of Fluids upon the Nitrogenous Assimilation and Metabolism in Typhoid Fever. (*St. Petersburg Inaugural Dissertation*, 1890, p. 72.)

421. KOGELMANN, F.—On Oil of Turpentine Treated with Potassium Hydroxide in Catarrhal Affections of the Air Passages. (*Deutsche Med. Zeitung*, Feb. 13, 1890.)

422. PENZOLDT.—On Orexin: a valuable Stomachic. (*Therap. Monatsh.*, Feb., 1890.)

423. MAIRET, PROF. A.—On Therapeutical Applications of Injections of Testicular Fluid. (*Bull. Med.*, No. 13, 1890.)

424. **Patton, Dr. Joseph.**—On the Treatment of Cardiac Arhythmia due to Disease of the Kidneys and Vascular System. (*Medical News*, April 12, 1890.)

425. **Mays, Dr. Thomas J.**—On the Hypodermic Treatment of Asthma with Strychnine and Atropine. (*Boston Medical and Surgical Journal*, April 3, 1890.)

426. **Nothnagel, Prof.**—On the Treatment of Cardiac Disease. (*Boston Medical and Surgical Journal*, Vol. cxxii., No. 15.)

427. **Denne, Mr.**—On the Use of Strophanthus in Children. (*Centralblatt für Klinische Medizin.*)

428. **Bonnifen, Mr. T. A., L.R.C.P.**—On the Treatment of Typhoid Fever.

429. **Lawrie, Surg.-Major.**—On Antimony in Inflammations. (*Practitioner*, p. 254, April, 1890.)

430. On Somnal. (*Gazzetta degli Ospitali*, No. 21, 1890.)

431. **Johnston, Dr. G. Ainslie.**—On the Poisonous Effects of Exalgine. (*Brit. Med. Jour.*, May 3rd, 1890.)

Art. 417. *Shtcherbak on Bromide of Gold in Epilepsy.*—In 1888, Dr. Goubert, of Paris, published a work (*Nouveau Traitement de l'Epilepsie, la guerison possible*), in which he described eight cases of epilepsy apparently cured by the internal use of bromide of gold (Au. Br.), and drew attention that (1) the remedy proves effective even in very small doses (0·008 to 0·012 gramme); and (2) even on a prolonged administration (for 12 or 18 months) never gave rise to bromism or any unpleasant accessory phenomena. Later on, Professor I. P. Mierzejewski, of St. Petersburg (*Proceedings of the St. Petersburg Society of Psychiatrists*, 1889), communicated a case of grave hysteria, in which the bromide (in doses varying from $\frac{1}{4}$ to $\frac{1}{12}$ grain) had proved very beneficial after a complete failure of all ordinary means. Still later, Professor S. N. Danillo, of St. Petersburg (*Ibid.*, 1890), tried bromide of gold in eight cases of epilepsy, the drug being given in pills, containing each $\frac{1}{8}$ grain; at first 4, subsequently up to 12 or 16, pills a day. In three of the cases the remedy remained inert, but in the other five a more or less considerable amelioration ensued; in one the fits ceased altogether. Professor P. I. Rosenbach, of St. Petersburg (*Ibid.*, 1889), similarly resorted to the drug (administered after Goubert's rules), in six cases of inveterate epilepsy in which bromide of potassium had failed to bring about any relief. In all of the patients the fits at first, for a few weeks, became less frequent, but subsequently regained their former frequency. Neither Dr. Rosenbach nor Dr. Danillo saw any phenomena of bromism beyond some decrease of reflex irritability of the fauces. In view of those clinical observations Dr. Alexandr E. Shtcherbak, of Professor Mierzejewski's laboratory (*Vratch*, No. 9, 1890, p. 202), has recently undertaken a fairly long course of experiments on dogs with exposed cortical motor area, the principal point being to study anti-epileptic effects of the drug in comparison with bromides of potassium and sodium. The gold salt was introduced either under the skin or into the femoral vein or into the stomach. The essential results may be condensed somewhat as follows:—1. Bromide of gold undoubtedly inhibits the cortical motor centres, and that even when administered in far lesser doses comparatively with the other bromides. [After an internal administration of bromide of gold in the dose of 0·1 or 0·2 gramme pro kilogramme of the animal's weight, even the strongest and very prolonged electric stimulation of the corte fails to bring about any epileptic seizures. To obtain the same effects from bromide of potassium the latter should be introduced in the dose of 0·6 or 0·7 pro 1 kilogramme, while bromide of sodium should be given in still larger quantities.] 2. The most marked effects are observed when the drug is injected into veins, when even 0·005 gramme pro 1 kilogramme totally inhibits the fits. 3. Irritability of individual motor centres, as determined by the appearance of contractions in corresponding muscular groups, is depressed by bromide of gold in a but trifling degree. 4. Excitability of the white substance of the motor region remains intact. 5. The drug seems to affect mainly the tracts of communication between individual motor centres as well as between the latter and remote areas of the cerebral cortex. 6. It does not appear to possess any particular cumulative action comparatively with the other bromides. 7. Of accessory effects there are observed only vomiting (very rarely, and that solely on an internal use) and some depression of pathic sensibility only on the use of larger doses, such as 0·15 gramme pro 1 kilogramme. (Even a prolonged administration never gives rise to unsteady gait, general depression or languor, and emaciation, all of which symptoms are observed in the case of bromide of potassium.) 8. The physiological effects of bromide of gold and their being different from those of the other bromides cannot possibly be attributed to the proportion of bromide present therein, since the strongest of the three, bromide of gold, contains the smallest amount of bromine (55 per cent. by weight), while the weakest of them, bromide of sodium, shows the richest proportion of the element (77·7 per cent.), the potassic salt standing midway with 67·2 per cent. of Bromine.

418. *Tzisvitzky on the Physiological Action of Methylal.*—Following the suggestion by Professor S. A. Popoff, Dr. Victor L. Tzisvitzky, of St. Petersburg has undertaken an extensive experimental inquiry into the biological action of methylal—a hypnotic remedy first introduced by Dr. Benjamin W. Richardson in 1868, and then re-introduced by Dr. E. Personali in 1886. [*Vide* the London Medical Recorder, 1887, May, p. 198; Oct., p. 435; Nov., p. 503; and 1888, July, p. 284.—*Rep.*] The experiments were conducted on frogs and dogs, Merck's preparation being invariably employed. The author arrives at the following conclusions:—A. *Cold-blooded animals.* 1. Methylal depresses and paralyses voluntary movements. 2. In middle doses (0·1 to 0·2) it first augments and subsequently diminishes excitability of the spinal cord. In lethal doses (0·4 and upwards) it depresses the irritability from the very beginning. 3. The drug powerfully retards and inhibits reflex action, which is determined by its depressing influence both on the spinal cord and sensible nerves. 4. Its action on motor nerves is but slight—small doses somewhat increasing their excitability, large ones producing a fleeting and trifling depression. 5. The drug considerably increases irritability of striated muscles. 6. It retards and, when given in large doses, ultimately paralyses respiration, a striking retardation occurring even after very small doses (such as 0·01 or 0·02 gramme). 7. In doses of 0·3 and 0·4 gramme it paralyses the cardiac action and

rapidly causes death. Its action on the heart may be divided into two stages. At first the drug markedly increases the strength of cardiac contractions, which should be attributed to (*a*) its raising irritability of the cardiac muscle itself, and (*b*) its stimulating the excito-motor cardiac ganglia. In a subsequent stage the drug weakens and retards cardiac contractions, which is caused by (*a*) supervening exhaustion (atony) of the cardiac muscle and motor ganglia, and (*b*) a fleeting excitation of the peripheral and, possibly, partly central cardio-inhibitory apparatus. B. *Warm-blooded animals.* (The drug was introduced either into veins, or the stomach, or under the skin.) 1. Methylal depresses excitability of the brain (motor area) to a certain degree. 2. As far as dogs are concerned, the drug develops a hypnotic action only when introduced in a lethal dose. (2·5 grammes pro 1 kilogramme of the animal's weight). 3. It inhibits reflex action only when administered in large doses. 4. It accelerates the cardiac action through stimulating the central cardio-accelerating apparatus. 5. The drug at first raises and subsequently somewhat depresses the arterial tension, which is dependent upon its first stimulating and then inhibiting the vaso-motor centres. 6. It increases the frequency of respiratory movements, which should be attributed to its affecting the respiratory centres. 7. The drug does not manifest any influence on the bodily temperature. The general conclusion of Dr. Tzisvitzky is to the effect that "methylal hardly ever will find any therapeutic use as a hypnotic remedy." Neither can it be expected that the drug will be ever employed as an antidote in cases of strychnia poisoning, since there does not exist any antagonism between the two substances.

419. *Pavloff on the Physiological Action of Hydrochlorate of Hyoscine.*—Dr. Konstantin L. Pavloff, of St. Petersburg, has undertaken, under the guidance of Professor S. A. Popoff, an experimental inquiry into the physiological action of hydrochlorate of hyoscine, and obtained the following results:—*A. Cold-blooded animals:* Fifty-seven experiments on frogs, weighing from 25 to 30 grammes. (1) Very small doses (under 0·001 grammes) of hyoine stimulate a peripheral cardio-inhibitory apparatus, the cardiac action becoming slower. (2) Small doses, from 0·001 to 0·005 grammes (*a*), weaken the said apparatus; (*b*) slightly depress an intra-cardiac inhibitory apparatus; (*c*) somewhat accelerate the cardiac action; (*d*) somewhat increase muscular contractibility, irritability of the spinal cord, and conductivity of motor nerves; and (*e*) slightly depress excitability of peripheral endings of sensible nerves. (3) Middle doses, from 0·005 to 0·02 gramme (*a*), affect the inhibitory and musculo-motor apparatuses of the heart, and sometimes slightly retard the cardiac action; (*b*) considerably lower reflex action, chiefly through depressing excitability of peripheral endings of sensible nerves; and (*c*) as considerably diminish irritability of striated muscles, especially when the drug is brought into immediate contact with the latter. (4) Large, or toxic, doses, from 0·02 to 0·1 gramme and upwards (*a*) affect the inhibitory, and more especially musculo-motor apparatuses of the heart, giving rise to an intense retardation of the cardiac rhythm up to a total diastolic stoppage; (*b*) considerably lower, and ultimately destroy reflex action; (*c*) paralyse peripheral terminations of sensible nerves; (*d*) destroy conductivity of motor nerves; (*e*) rapidly—in from 10 to 15 minutes—induce a complete loss of voluntary movements, in consequence of a direct action of the drug on the brain. (5) Doses of from 0·07 to 0·1 rapidly prove fatal. *B. Warm-blooded animals:* Twenty-eight experiments on dogs and rabbits, the doses varying between 0·00005 and 0·02 gramme pro 1 kilogramme of the animal's weight. (1) Hyoscine causes a primary retardation of the cardiac action, which depends upon an initial stimulation of the cardiac inhibitory apparatus. A fleeting retardation may be sometimes observed even after the injection of the minimum dose stated. (2) Subsequently, the drug greatly increased the frequency of cardiac beats, which is caused by supervening depression, or paralysis of a peripheral cardio-inhibitory apparatus. In that respect hyoscine forms a direct antagonist both to eserine and pilocarpine. (3) The acceleration of the heart is followed by a secondary retardation, depending upon the drug depressing the peripheral inhibitory and excito-motor apparatuses of the organ. (4) In the beginning, hyoscine elevates the arterial tension; but subsequently, after a more or less prolonged interval, the pressure sinks to the normal, or even below the level. The rise is determined by the drug stimulating the whole vaso-motor apparatus, especially the spinal and cerebral vaso-motor centres, the subsequent fall being caused by supervening exhaustion of the cardiac muscle. (5) When introduced in relatively large doses, hyoscine may produce a slight retardation of respiration, in consequence of a depressing action on the respiratory centres. (6) The drug markedly inhibits the secretion of saliva. In that regard it represents a direct antagonist to pilocarpine. (7) Hyoscine does not act either on the peripheral or on the visceral temperature. 8. It does not accelerate the process of disoxidation of blood. (9) It markedly depresses irritability of the cerebral cortex (motor area). (10) It slightly lowers pathic sensibility, while the tactile one remains in a normal condition. (11) The drug rapidly causes a strong and prolonged dilatation of the pupils, which is probably dependent upon a stimulating action on the sympathetic nerves. (10) On the whole, in pharmacological regards, hyoscine very closely resembles atropia, differing from the latter mainly in a depressing action on the cerebral irritability. Dr. Pavloff believes that hyoscine may prove useful in the treatment of mental affections.

420. *Matzkevitch on the Influence of a Free Ingestion of Fluids on the Nitrogenous Assimilation and Metabolism in Typhoid Fever.*—Dr. Vasily G. Matzkevitch, of St. Petersburg, publishes a valuable work on the subject, embodying his experiments (in Professor I. T. Tchüdnovsky's clinic), on eight well-nourished patients (soldiers and working men) suffering from enteric fever. All the observations were commenced between the seventh and tenth day of the disease to last from 16 to 20 days. The patients received each daily (*a*) 1,100 cubic c.c. of milk with 150 to 250 grammes of white bread; (*b*) a cupful of broth, and from 300 to 500 cubic c.c. of weak tea; (*c*) Stokes's mixture (℞ aquæ cinnamomi, vini Cognac, ana ℥jjj; vitelli ovi No. 1; tinct. valerianæ ʒj; syrups simplicis ℥ss. M.D.S. A tablespoonful every two hours); (*d*) drinking water of the ordinary room temperature, from 300 to 400 cubic c.c. every hour, between 2,000 and 3,000 cubic c.c. a day; (*e*) a bath at 28° R., twice or thrice daily. The outcome of the clinical experiments may be condensed as follows: 1. In the febrile stage, a free ingestion of fluids gives rise to a markedly increased assimilation of nitrogenous ingredients of food:

in the period of convalescence, on the contrary, it diminishes the assimilation. 2. The nitrogenous metamorphosis is on the whole increased (in three of the eight cases, however, some diminution was noticed). 3. The patient's weight slightly falls, but, on the whole, the body apparently tends to preserve its primary weight. 4. A free ingestion of fluids does not seem to manifest any marked influence either on the temperature, or pulse and respiration. 5. The daily amount of urine increases, while its specific gravity sinks. Be albuminuria present, it disappears under the influence of a liberal administration of liquids. 6. The latter does not increase diarrhœa in typhoid patients. In fact, a free ingestion of fluids never gives rise to any unpleasant accessory effects in the disease under consideration.

Valerius Idelson, M.D.

421. *Kogelmann on Oil of Turpentine Treated with Potassium Hydroxide in Catarrhal Affections of the Air Passages.*—Inhalations of the vapour of ethereal oils, especially oil of turpentine, Kogelmann has tried repeatedly, in commencing catarrh of the nasal cavities, but always without effect, the cold taking its course. In December last, having taken cold in an evening walk in cloudy, damp weather, he tried an inhalation of the vapour of oil of turpentine treated with potassium hydroxide, with surprisingly good results. He had mixed in a flask for some chemical work 9 vol. of rectified oil of turpentine, 1 vol. of ordinary petroleum, and 1 vol. of an alcoholic solution of potassium hydroxide (1 pint by weight of caustic potash in 5 pints by weight of absolute alcohol). The mixture was well shaken and allowed to settle. It was inhaled, the nose being held close to the mouth of the flask, for five long breaths every quarter of an hour. After five or six repetitions the cold was completely relieved. As a matter of precaution, the inhalation was repeated on the three following days. Whether the presence of petroleum is useful, or whether it is necessary to use so concentrated a solution of potash, or whether, as is very probable, the sodium hydroxide would act as well, he has not determined. Oil of turpentine treated in this manner is free from any trace of acid formed by oxidation, and possibly in this consists its advantage over ordinary turpentine. Lastly, it may be mentioned that this mixture had been standing for about fourteen days before it was used in a half-filled flask, but never exposed to direct sunlight.

422. *Penzoldt on Orexin: a valuable Stomachic.*—The test of a true stomachic is that it ought not only to stimulate the appetite, but also to lessen the duration of digestion. These properties Penzoldt finds in Phenyldihydrochinazolin, or Orexin (ὄρεξις appetite). Experiments on two young medical men and 36 patients show that in many cases orexin stimulates the appetite, and thereby improves lowered nutrition. It seems of less use in diseases of the stomach than in loss of appetite and other complaints, such as chlorosis, phthisis, pleuritic exudations, heart disease, or when loss of appetite is the only symptom. It is also of use in the anorexia following great operations. It is to be given in the doses of 0·3—0·5 grammes once or twice daily, in a coated pill, thus: ℞. orexinis hydrochlor., 2·0; ext. gentian; pulv. rad. altheæ q. s. ut fiat pil, 20; obd. gelat. sig.; 3 to 5 pills once or twice daily with a breakfast cup of broth.

423. *Mairet on Therapeutical Applications of Injections of Testicular Fluid.*—On the strength of the experiments of Brown-Séquard and Variot, Professor Mairet, of Montpellier, has tried injections of testicular fluid in mental diseases, especially those characterized by stupor. Brown-Séquard says that in women analogous effects can only be expected from injections of the fluid from the ovaries. However, Mairet's experiments on two women with testicular fluid show that the action is the same as in men, while injections with fluid from the ovaries are much less active—in one case *nil*. The testicular fluid, however, was taken from dogs, while the fluid from the ovaries was taken from rabbits; and the testicular fluid of dogs is more active than that of rabbits. But, in every case, the activity of the testicular fluid is not specific, but simply the consequence of its chemical composition; it is, therefore, as potent in action on the nervous systems of woman as in that of men. The testicular fluid was obtained from young adult dogs, castrated in the laboratory (Montpellier) by Professor Mairet. Strict antiseptic precautions were taken, and the epididymis, which in dogs often contains microbes, and therefore pus, was removed. The testicles were pounded in a mortar, with the addition of from 20 to 25 ccm. of distilled water to each testicle. The resulting fluid was filtered, and the pink filtrate, containing no spermatozoa, was injected. One testicle furnished from 12 to 15 ccm. of filtrate. The injections were made in different places, especially in the lumbar and abdominal regions, once or twice daily. Slight redness at the point of injection was the only local symptom. Apparently but little pain was caused. Six patients were thus treated. The cases of four are given. The fifth, a case of *folie circulaire*, probably, in due course of the disease, became acutely maniacal; the sixth was removed to another establishment soon after treatment was commenced. (1) A man, 37, 18 months ill, with alternating periods of excitement and depression. With the first occur confusion of intellect, fear and sadness, with hallucinations of various kinds; with the second, deep stupor. When the injections were commenced, the last state was very marked—vacant look; answers slow, or impossible to obtain. Sitting on a stool, or standing, he remained by the hour in the same position, not thinking of going to meals, or of eating when placed at table. He had to be waited on like a child. The mental disturbances point to functional and hereditary dementia. After three days the stupor disappeared. He walked constantly up and down, pressed the hand of the attendant, to show the increase of his strength. Restless; hearing hyperæsthetic, thinks that the people about him wish to do him harm. Colour of the face showed the excitement of the mind. No apparent excitement of sexual ideas. (2) A woman, 25, became insane while nursing her two children. She had general rheumatism, with delirium; then stupor, alternating with periods of excitement and depression, with hallucinations of sight and hearing. Two months later, only the stupor remained. One could scarcely obtain from her a badly articulated answer. Passed everything under her, and must be fed like a child. The extremities cold and œdematous, so that she had to be kept in bed. At the time the injections were commenced, the bodily condition was better; but the stupor had not varied for three months. After three days' treatment, the patient stood up, answered with more liveliness and greater intelligence; ate alone, and with appetite; busied herself with her needle, became neat

and tidy, and had a certain initiative. The expression was more open, and the movements less weak; sight quick, and hearing hyperæsthetic. Probably a certain degree of sexual excitement, and disappearance of anæsthetic districts, which had existed in the right leg and left arm. (3) Puerperal insanity, hereditary, had at first maniacal attacks; but for five months before the commencement of the injections, in a state of deep stupor; vacant, unquiet look; has to be treated like a child, fed, taken to the closet, &c.; extremities cold. After the injections, restless, going from place to place, from one patient to another, looking at them in the face; removing their work; trying to recognize and kiss her relations. Her intelligence improved. She answered sensibly. To the question if she wanted anything, she said she wished to go home, to take care of her husband and children. She embraced old people and children, taking them for her parents and children, and ate up the food she was given to carry. Perhaps, certain sexual excitement. (4) Man, 37, insane for many years; intelligence all but absent. Stupor, expressionless, cold extremities, intermittent pulse. Can only be aroused by vigorous shaking to give imperfect answers. Stays by the hour in the same attitude; must be fed. In this case, also, the injections caused evident cerebral excitement. The condition of the patient was a guarantee that suggestion had no part in the effect of the injections. In stupor, these injections of testicular fluid act on the intelligence, sensation, and mobility. At the same time, these conditions of excitement were only of diseased nature and fugitive. Ten days after the injections they had ceased. At the same time, there were other effects which invited the continuance of the injections, that is to say, on the circulation, temperature, and nutrition. (1) The normal frequency of the pulse was not influenced, but an abnormal frequency became normal. In one case the pulse fell from 130 to 80; and, in another, it rose from 56 to 80. In one patient, in whom the pulse was intermittent, it became regular. After some time the pulse became stronger—*i.e.*, as nutrition improved. (2) The temperature of the body was also regulated. From 36° C. it rose to 37°. (3) Nutrition improved; the appetite so increased that the patients ate double what they did before. This effect outlasted the excitement, and caused improved tone of the nervous system. Mairet now employs the injections in the following way:—When, after a number of injections, the tonic effect appears, a pause is made until the effect works off; then a new series of injections is commenced. Case 2 was so improved by one series of injections, that she must be looked on as cured. The patient asserted that, after each injection, she felt stronger, and her mind clearer. The other patients, too, essentially improved.

G. D'Arcy Adams, M.D.

424. *Patton on the Treatment of Cardiac Arhythmia due to Disease of the Kidneys and Vascular System.*—Dr. Patton, in this paper, deals with the form of cardiac arhythmia which is caused by chronic disease of the kidneys, and is generally associated with, more or less, arterio-sclerosis, principally affecting the medium-sized and smaller arteries. The patients are subject to spasmodic arterial attacks, which greatly increase the work of the heart, and it is at such times that the cardiac arhythmia presents itself. The attacks are characterized by partial suppression of urine, irregularity of heart, dyspnœa, passive congestion, or œdema of the lungs, and all the signs of cardiac failure. When disease of the heart—the result of chronic endocarditis—is associated with chronic kidney disease, it is not always easy to place the responsibility for the arhythmia. Failure of compensation, with its resulting arhythmia, will be associated with ataxia of the heart from nephritis and arterial contraction; and the success in treatment depends on our being able to define the relation of each form to the individual case. For arhythmia due to disease of the kidneys and vessels, the indication is, not to force the heart to work harder, but to give it less to do. This end is gained by increasing the function of the kidneys, and by lessening the tension of the arteries by dilating them. Dilatation of the vessels attains two objects; it diminishes the work of the heart, and it allows the *vis a tergo* of the heart to reach the kidney circulation, and diuresis is increased. Of the various medicines used to produce vascular dilatation, Dr. Patton has found opium the most serviceable. Nitrite of amyl, trinitrine, chloral hydrate, &c., may be useful temporarily, in urgent cases; but their effect is too transient. The bowels should be kept free, and the diet light. Such special diuretics as are best adapted to the individual case should be employed. Dr. Patton frequently employs a mixture of nitrate of potash and buchu. With this he gives five drops of tincture of opium three or four times a day. Dr. Patton gives particulars of four cases, illustrating the good effects of opium in the conditions above described.

425. *Mays on the Hypodermic Treatment of Asthma with Strychnine and Atropine.*—Asthma is essentially a spasmodic neurosis of the pneumogastric nerves. The exciting causes reside either in or outside the lungs. Dust, and other offending materials suspended in the air, which, when inhaled, produce irritation of the bronchial mucous membrane, are among the common causes. The causes outside the lungs may reside in the nose, stomach, intestines, liver, uterus, &c. It is doubtful, however, whether, without a peculiar predisposition, any degree of disorder in any of those organs would have the power of exciting an attack. The aim of treatment is (1) to alleviate the attack, and (2) to prevent its recurrence. To accomplish the former various remedies, such as atropine, morphine, chloral, nitroglycerine, lobelia, &c., are used; and, for the latter, various measures are employed for the purpose of breaking up the casual connection between other organs and asthma. It must be remembered, however, that there is a general lowering of the nerve tone of the body, and hence, by invigorating the nervous system, asthma may be made to disappear. For this purpose, Dr. Mays has, during the last six months, administered strychnine hypodermically with good results. Its use was suggested to him by the good results obtained by Dr. Echeverria, in the treatment of epilesy, with this alkaloid. His earlier cases were treated with strychnine alone; but, latterly, he added atropine, which, he thinks, enhances the action, especially in old and stubborn cases. He begins with a fiftieth of a grain of strychnine, and a hundred and fiftieth of a grain of atropine, daily, gradually increasing the former to a twenty-fifth of a grain, and the latter to a hundredth of a grain. After a thorough impression is made on the disease, the drugs are administered every other day, and are gradually discontinued. Dr. Mays cites particulars of six cases, illustrating the good effects of the treatment. The cases improved very rapidly under the treatment, and

had continued well for some weeks or months at the date of the report. In most of them, however, other drugs, such as quinine, iron, cod liver oil, &c., were administered, in addition to the strychnine and atropine injections. J. B. Ball, M.D.

426. *Nothnagel on the Treatment of Cardiac Disease.*—Professor Nothnagel, in lecturing upon the treatment of cardiac disease, recommends, in those cases where digitalis is not desirable, that the following drugs may be tried:—Convallaria, adonis vernalis (three to six grains daily), squills, caffein sodiosalicylat. (three to five grains five times a day), absolute milk diet, tinctura of strophanthus (eight drops two or three times a day for eight to 14 days), and, as a last resort, calomel, for its direct diuretic action on the kidneys. Under its use the quantity of urine may rise from 300 to 7000 c. c. or more, and dropsy disappears for from four to eight weeks. Upon its re-appearance, the drug must be given again, even as many as eight times a year. Warm stimulating baths are not to be allowed, except under very great precautions. Chalybeate waters are also contra-indicated when cyanosis is present. Baths have recently been highly praised, but Prof. Nothnagel considers the benefit is not from the baths, but the massage and hygiene carried out at the baths. So long as compensation is undisturbed, a cold water cure, with the temperature at least above 57° F., and not too energetically performed, may be allowed. Often passive gymnastics are of benefit. The limitation of liquids is always prudent. For neuralgia and pain, paraldehyde, amyl hydrate. sulphonal, and chloral should be used. If these fail, morphia may be used hypodermically.

427. *Denne on the Use of Strophanthus in Children.*—Denne records twenty-one cases in which he has carefully studied the action of strophanthus in children. Of the twenty cases, seven were cases of mitral disease, without compensation; three of pleurisy, with exudation; five of scarlatinal nephritis, two of bronchial asthma, two of tuberculous phthisis, and two of pertussis. The following are his conclusions:—(1) Strophanthus is useful in childhood, but can only be given from the fifth year onward. Exceptionally dyspeptic troubles are met with. The dose must not exceed three drops, four or five times a day. (2) The principal action is to increase the urinary secretion brought about through the increase of blood pressure. Compensation of valvular incompetence becomes more assured than is even the case with digitalis. Where the blood pressure is normal, or already raised, the action of strophanthus remains in abeyance. (3) The second effect of strophanthus is the removal of dyspnœa, especially in cases of nephritis running a chronic course, bronchial asthma, and pertussis. Here, also, increase of blood pressure comes probably into play. (4) When speedy compensation of valvular defect, prompt increase of blood pressure, with adequate slowing of the pulse frequency, and increase of the urinary secretion are desired, digitalis is to be preferred to strophanthus, while the latter is indicated when digitalis has lost its effect, and in urgent dyspnœa. In such cases, Denne recommends a combination of the two remedies. (5) Cumulative action, or loss of power, if continued for a long time, was not observed.

Francis Hawkins, M.D.

428. *Bonnifen on Treatment of Typhoid Fever.*—Mr. Bonnifen strongly advocates the use of antefebrin combined with naphthaline ground together into a fine powder and thus administered: six to eight grains of each are given three or four times a day, according to the urgency of the symptoms. The diet is to be confined to milk and barley water.

429. *Lawrie on Antimony in Inflammations.*—Surg.-Major Lawrie deals briefly with the use of small frequently-repeated doses of antimony to arrest inflammation. The author states that there is something about antimony which requires to be worked out; it is not yet understood how it is that the well-known tolerance sets in after the drug has been administered several times, either in large or small doses; nor is it understood how it is that antimony increases the frequency of the heart's action. The author has lately employed the drug with marked success in mucous enteritis, which is the most fatal disease to children in the plains of India. In these cases it arrests the diarrhœa and fever when nothing else will. Also in the treatment of typhoid fever it has been found to cut the disease short with such certainty that it almost appears doubtful whether the lesion of typhoid is specific, or is not rather incidental or adventitious. In typhoid fever and in mucous enteritis, the diarrhœa is due to an inflammation of the intestine; the use of antimony arrests the inflammation and checks the diarrhœa. Antimony has no lowering effects unless it be pushed so far as to cause its own peculiar nausea and diarrhœa. On the contrary it increases the frequency of the heart's action while slightly lowering the blood pressure. Tolerance of the drug is very soon established, it can be administered with cardiac tonics, and there are few, if any, cases which it cannot be employed in sufficient quantity to do good without any fear whatever of inducing depression. The dose for an adult is one-sixth of a grain of tartar emetic every one or two hours. In children one-sixteenth of a grain every one or two hours is sufficient to begin with. [Antimony has really fallen out of use in late years but that it possesses great value in a variety of conditions is proved by the large number of diseases in which it has been employed with advantage.]

Richard Neale, M.D.

430. *On Somnal.*—Somnal is a compound or mixture of chloral, urethan, and alcoholic ethyl. It appears as a colourless fluid which, on cooling, takes the form of needle-shaped crystals. It has a bitter taste. It has been tried with good results by Dr. Constantin Paul in articular rheumatism, and also by Dr. Guttmann, who found that it produced a pleasant sleep lasting from six to eight hours without any bad effects. In some cases, however, it fails in its action. Dr. Zagorski, of Warsaw, prefers it to all other hypnotics for the rapidity of its action, the duration and intensity of the sleep, and for the absence of any effects upon the bowels, the heart, the lungs, and the general temperature. The dose recommended is about thirty grains in a little distilled water and sirup of orange. It is deliquescent and soluble in water and in one third of its weight in alcohol. Others have treated it as a mixture of uncertain composition of a bad, bitter taste, and less powerful than chloral. Lutze found it only efficacious in 30 per cent. of his cases, and only useful in 15 per cent.; and in 8 cases of great excitement it was found to act more quickly than in chloral. Drs. Venanzio and Sighicelli of Milan (*Gazzetta*. No. 25), have tried somnal in 80 patients in doses of from two to four grammes. In some few cases they went as high as six grammes. The general results observed by

these physicians were as follows: Somnal produces no gastric disturbance and neither effects the appetite nor the digestion. Sometimes the pulse becomes more frequent and weaker a little while after taking the drug, but this effect soon passes away. Somnal has no action on the respiration, but sometimes produces a redness of the face dependent upon paralysis of the vessels, which is easily increased by the addition of a small quantity of alcohol. In doses of 30 grains somnal may be used for slight restlessness, but in cases of deep insomnia, dependent on cerebral excitement, it is necessary to give as much as 60 grains which generally produces a sleep of from five to six hours. It rarely happens that sleep comes on in half an hour; in general it takes about three hours, sometimes even as much as four or five till the desired effect is obtained. In cases accompanied with mental depression, somnal acts better than where there is much excitement. On the whole, they consider that somnal is a useful hypnotic, from the duration and quality of the sleep which it induces, from its having no bad effects and also from its small cost. In its therapeutic effects it has a resemblance to its two principal components, chloral and ether.

WILLIAM W. IRELAND, M.D.

431. *Johnston on Poisonous Effects of Exalgine.*—The patient, a medical man between 40 and 50 years of age, was suffering from pain in the lumbar and ilio-sacral region, for which, one evening at 9.30 p.m., he took one grain of exalgine; at 10.15 p.m., not feeling any relief, he took two more grains in a little whisky. Shortly afterwards he complained of giddiness and said that his head felt so large that it seemed to occupy the whole room. He continued, however, playing cards till 11 p.m., when, without warning, he collapsed and was unable to speak or move and lay gasping for breath. He continued in that state over half an hour, when he was able to speak a little, and said that each breath was a fearful effort, he was carried up to his bedroom and placed in an arm chair as he was unable to breathe lying down. He then got worse again, his breathing being especially distressing and somewhat resembling that of a person in an attack of asthma. His respirations were 38 shallow, pulse rather weak, body surface cold but not cyanosed. Two hours later he got some relief after vomiting, and he then suffered from dysuria; an hour later he was able to go to bed and slept well. He afterwards stated that during the dyspnœa he had a feeling of numbness all over, and felt as if his diaphragm had stopped working. Next morning he was slightly jaundiced, but in other respects quite well. [*Rep.*—As these effects have not been observed in any other recorded cases they were probably due to idiosyncrasy.]

Gynæcology and Obstetrics.

RECENT PAPERS.

432. FETHERSTON, DR.—On Pilocarpine in Puerperal Eclampsia. (*Trans. Med. Congress*, p. 707.)

433. COE, DR.—On the Ultimate Results of Laparatomy for the Removal of Diseased Appendages. (*New York Med. Record.*, April 19, 1890.)

ART. 432. *Fetherston on Puerperal Eclampsia.*—In an experience of 20 cases, Dr. Fetherston felt every reason to rely on the efficacy of hypodermic injection of pilocarpine, in half-grain doses, every three to six hours, thus confirming the reports of numerous observers noted in the Medical Digest, section 1589: 3, all of which reports show that in pilocarpine we have a reliable agent in eclampsia generally, and in puerperal eclampsia specially.

RICHARD NEALE, M.D.

433. *Coe on the Ultimate Results of Laparatomy for the Removal of Diseased Appendages.*—The writer invites attention, not to the limitations of laparatomy for ovarian and tubal disease, nor to the number of difficult operations successfully undertaken, but to the condition of patients, one, two, or five years after recovery. Surgeons often lose sight of their cases after their discharge from hospital. Can the terms "recovered" and "cured" be taken as synonymous under these circumstances? A year should be allowed after the establishment of an artificial menopause to allow its symptoms (flushing, metrostaxis, etc.) to disappear. Assuming that most gratifying results have been obtained in many cases from laparatomy, the author confines his attention to permanent ill-effects, which he considers under the headings of (1) psychical, and (2) physical. Under the first should be included not only the "psychoses" resulting from gynæcological operations, minor as well as major, but actual insanity. One authority believes that most of the cases reported as due to removal of ovaries would have become insane without operation. On the other hand, an asylum expert asserts that at least 10 per cent. of the women whose tubes and ovaries were extirpated, became insane in consequence. Apart from exaggerated statements, careful observers hold that there is direct relation between the operation and the occasional subsequent abberation. The question of "unsexing" should also be considered under this heading. The second division of physical results may be general or local. Under the former are various neuroses, such as circulatory abnormalities (cerebral hyperæmia), and various visceral disturbances, especially intestinal troubles, due to adhesions. All who have had occasion to perform laparotomy for the second time on the same patient, will agree with Martin as to the frequency of localised peritonitis in apparently aseptic cases. Peritonitis means adhesions. The local or intra-pelvic complications of laparatomy are of special interest. Persistent pelvic pain, congestion of the uterus (with or without pseudo-menstruation), vesical and intestinal disturbances, lasting perhaps for years, are due to adhesions, the result of localised peritonitis. If adhesions existed previously, they are very likely to re-form. Small indurations round the stump, or in the broad ligaments are sufficient to cause severe pain. That adhesions are not of more common occurrence is a matter of surprise, considering the relation of the stump to gut, or wounded surfaces. When slight, they may give rise to severe colicky pains; when more extensive, the patient is in constant danger of intestinal obstruction. When diseased adnexa—a pyosalpinx, abscess, or adherent cyst—is emptied and fastened in an unnatural position, as in the abdominal wound, even if the intestines do not become adherent to it, undue traction is made upon the pelvic organs (and especially upon the neck of the bladder), giving rise to permanent distressing symptoms. No precautions on the part of the operator can avoid these dangers. It seems to be practically impossible to predict that localised peritonitis may not develop in any given case. Eight illustrative cases are added. Dr. Coe observes that if, with his limited experience, he has seen so many

laparotomies followed by permanent troubles, those operators who number their cases by hundreds could, if they would, add much to our knowledge on these points. He concludes by reiterating his assertion that recovery from laparatomy is *not* synonymous with cure. DAVID WALSH.

Diseases of the Nervous System.

RECENT PAPERS.

434. STRÜMPELL, PROF. H.—On Multiple Neuritis with Double Facial Paralysis and Ataxy of the Lower Extremities. (*Deut. Med. Zeit.*, Feb. 10, 1890.)

435. IREDELL, MR. C. L. M.,—On Aural Diseases and Epilepsy. (*International Med. Congress*, p. 789.)

ART. 434. *Strümpell on Multiple Neuritis with Double Facial Paralysis and Ataxy of the Lower Extremities.*—A young man of 26 was stung on the hand by a fly. This gave rise to inflammation of the arm, which got well, after several weeks, without suppuration. During this time the urine contained a small quantity of sugar. Some months after the infection, the patient, being apparently quite well again, began to suffer from pains in both temples, slight insecurity in both legs, and some difficulty of speech. The pains soon increased, and extended to the neighbourhood of the ears, also in the legs and arms. The other symptoms also became aggravated. Examination showed that double-sided facial paralysis, with complete reaction of degeneration, sensibility to touch of the lower extremities, some paresis of the muscles, extreme ataxy, absence of patellar reflexes on both sides, diminution of sensation in the legs, especially for touch, pain, and temperature perceptions. Under treatment by inunctions, followed by galvanization of the affected muscles and nerves, and sitz baths, his condition steadily improved, although slowly. The ataxy disappeared after some weeks. As to the origin of this multiple neuritis, Professor Strümpell thinks that a connection between it and the infective inflammation of the arm is possible. It may have, however, been a primary multiple neuritis. The participation of the facial nerve in multiple neuritis has been repeatedly noticed; it is, however, rare. Worthy of notice, too, is the association of facial paralysis with ataxy of the lower limbs. An analogous fact is the concurrence of post diphtheritic paralysis of the throat with ataxy of the lower extremities. The latter only has been noticed till now in alcoholic and diphtheritic neuritis. Professor Strümpell traces the ataxy, in conformity with his well known views, to a disease of the centripetal fibres in the peripheral nerves, which serve for co-ordination. He did not himself find sugar in the urine of the patient, but thinks it probable that there may be some near relation between the fugitive glycosuria and the neuritis. He himself observed in a lady, who occasionally had slight glycosuria without other symptoms of diabetes, the sudden appearance of sciatic neuritis, followed by peroneus-paralysis, the former getting well after a few months.

G. D'ARCY ADAMS, M.D.

435. *Iredell on Aural Diseases and Epilepsy.* —Mr. Iredell reports several cases shewing the different relations between epileptiform attacks and diseases of the ear. In several instances fits occurred during syringing the ear, or while wiping secretions from the meatus in which grew a polypus. The last of the cases reported is, perhaps, on the whole most instructive. C. C. æt. 20, was seen on the 8th August. His right ear had been discharging continually for thirteen years, following severe ear-aches. On the 1st December, 1884, he had an epileptic fit for the first time in his life; another one seized him six months later, and after this he had been subject to fits regularly at intervals of never more than three weeks or a month, until he came to me. Early in 1886 he had a polypus removed from the left ear, and at this time he joined a rifle corps. He was warned that the firing was not good for him, and so he found, for after practice at the butts he frequently had epileptic fits, with a distinct aura, so that he was forewarned some two or three minutes, during which he had made preparation. Under treatment the discharge from the ear has almost ceased, and he has had no fit since August 7th, 1888 (*i.e.*, a period of nearly four months), and feels much stronger and better in his general health. Beyond the local treatment, he has been given strychnia and bromide of potassium, of which latter he had taken considerable quantities before he came under treatment. [A singular case is reported in "Medical Digest" (sec. 1300: 1), when a louse on the tympanal membrane in a dog caused epileptiform fits, and in a man (sec. 1303: 4), caused an attack of Menière's disease.—*Rep.*]

RICHARD NEALE. M.D.

Pathology.

RECENT PAPERS.

436. HAYEM, DR.—On Rupture of the Gall-bladder in Infants. (*American Medical Record*, March, 1890).

437. BARTH, CARL.—On Primary Sarcoma of the Supra-Renal Capsule. (*Weiner. Med. Wochenschrift*, 1889.)

438. OSLER, WILLIAM.—On Fatal Hæmorrhage into a Large Goître. (*Med. and Surg. Reporter*, April, 1890.)

439. NOYES AND DANA. — On Tumour of the Medulla and Left Anophthalmus. (*Boston Med. and Surg. Journal*, vol. cxxii, No. 13.)

440. CHAMBERS, DR.—On Sarcoma of the Breast in a Child of Four Months Old. (*University Medical Magazine*, Pennyslvania, April, 1890.)

441. BOCK, DR.—On Hæmorrhagic Tumours of the Tongue. (*La Clinique*, May 1, 1890.)

ART. 436. *Hayem on Rupture of the Gall-bladder in Infants.*—M. Hayem reports a case of a female child, aged two months, who, during the second month of her life, was jaundiced to a considerable extent; there was also frequent subcutaneous hæmorrhage around the umbilicus and on the lips and ears. At the autopsy the abdominal cavity was found to be full of a fluid resembling bile, which seemed to have come from the gall-bladder. The surface of the peritoneum and the mesenteric glands were deeply stained. On examining the gall-bladder, there was found a small recent wound, which was imperfectly healed. M. Hayem considered the lesion traumatic, and also interesting as being practically an experiment showing the effect of aseptic bile in producing a hæmorrhagic tendency. Thinness of the walls of the gall-bladder in infants is a point often noted by M. Ollivier, who has seen a rupture of the gall bladder produce peritonitis in typhoid fever.

437. *Barth on Primary Sarcoma of the Supra-Renal Capsule.*—Dr. Carl Barth, of Vienna, reports the case of a man, aged 55, who had no bronze colour or pigmentation of the skin, and whose temperature was low or subnormal. At the autopsy a medullary sarcoma of the supra-renal capsule and liver was found. The sarcoma was of the small spindle-celled variety.

438. *Osler on Fatal Hæmorrhage into a Large Goître.*—The case was that of a woman, aged 44, who was an inmate of the insane department of the Philadelphia Hospital, and who had a goître occupying the entire space between the chin and the sternum, which had existed for an unknown number of years. On the day of her death she was up and helping at her ordinary work, when she fainted, became blanched and breathless, and died in a few hours. At the autopsy the body was noted to be well nourished, the skin of marble whiteness. The goître occupied the entire space between the chin and the sternum; in the lateral regions of the neck the swelling extended towards the clavicles and below the skin of the upper half of the sternum. On section, a space was opened between the bronchocele and the sternum, containing large clots, which had come from one of the lower cysts of the goître, which had ruptured. The blood extended into the cellular tissue of the neck and beneath the sternum into the anterior mediastinum, covering the aorta and upper part of the pericardium. The hæmorrhage passed behind the pharynx and down the course of the œsophagus for two or three inches. On removal, the trachea and œsophagus were found almost completely embedded in the goître, and the trachea seemed at its lower part somewhat compressed. There was ædœma of the left lateral wall of the pharynx and left ary-epiglottidean fold. The bronchocele weighed about three pounds, and was of the parenchymatous variety, with calcareous and fibroid change; there were also a few cysts. The thoracic and abdominal viscera presented no change. Dr. Osler remarks, that while hæmorrhage frequently occurs into the cysts of a goître, yet he cannot find any instance in which hæmorrhage produced a fatal result, and therefore we record the case.

439. *Noyes and Dana on Tumour of the Medulla and Left Anophthalmus.*—The patient, from whom the specimen had been taken, was a man aged 37, who had seventeen years ago suffered from a severe headache for one month which was followed by dimness of vision in the left eye. The centre of the visual field appeared dark and he became almost blind in that eye in 1875. A large cysticercus cellulosus was removed with the eye. There was then no further trouble until February, 1888, when there was a recurrence of a similar headache in the same part of the head—at first on the left side and which, later, became general. Then other symptoms began to manifest themselves, viz.: Vertigo, tinnitus aurium, numbness, weakness, and exaggerated reflexes upon the right side, paresis of the right internal rectus, staggering to the right side, ptosis, and nystagmus. In January, 1889, there was paresis of both externi, nystagmus more marked, weakness of left masseter and atrophy of left temporal muscle. February 11th, 1889, anosmia, taste very much blunted. Epileptiform convulsions were present on the 12th; on the 13th an operation for traumatic stricture was performed, and, on the 16th February, 1889, the patient died. *Autopsy.*—On examining the brain three tumours were found in the floor of the fourth ventricle, each tumour measured 16 centimetres in diameter. One was on the right and two tumours on the left of the median line; the one on the right was situated more anteriorly extending from the middle of the pons to the posterior corpus quadrigeminus. Of the two tumours on the left side, one extended from near the calamus to about the edge of the pons, and was intimately connected with the third tumour; the other extended into the left half of the pons and middle cerebellar peduncle. The left optic nerve was very much smaller than the right. The optic tracts were very nearly equal in size, but the left was a little larger than the right. The external geniculate body could hardly be made out upon the left side, and that on the right seemed smaller than normal. The left anterior corpus quadrigeminus seemed smaller than the right. There was compression and more or less destruction of the following nervous structures: the left lemniscus, left pyramidal tract, left eighth, ninth and tenth nerves and nuclei, left and perhaps right third nerves, probably fourth, sixth and seventh nerves, though these could not be examined. The tumours were found to be infiltrating sarcomata. The authors drew the following conclusions. The oldest and most extensive process was on the left side. The right hemiparesis was due to pressure on the motor tract in the pons and medulla. The external ocular muscles were involved without interference with the ciliary muscle or iris, and in an order which confirmed the arrangement of the oculo-motor nuclei as given by Hensen and Volcker, and other than that of Kahler and Pick or of Starr. Furthermore, the case showed, apparently, a total decussation of the optic nerve fibres.

440. *Chambers on Sarcoma of the Breast in a Child Four Months Old.*—Dr. J. P. Chambers records the case of a female child, well developed, with a tumour of the right breast about the size of a small hen's egg, which the mother said had been noticed when the child was about five weeks old, since which time it had steadily increased in size resisting discutient applications and pressure. The tumour was painless and the skin slightly darker than natural. The lymphatic glands were not enlarged, and family history negative. The tumour was removed and on microscopical examination it was found to be a round-celled sarcoma. Dr. Chambers has looked up over 100 references in the English, French and German languages, but has not found a similar case recorded.

FRANCIS HAWKINS, M.B.

441. *Bock on Hæmorrhagic Tumours of the Tongue.*—Blood tumours of the tongue which are met with are either aneurysmal or angiomatous. The diagnosis of these, although sometimes difficult, can nevertheless be made with precision, says the author, who states that he has recently had under his observation a blood tumour which differs from the aneurysmal type, both by mode of development and means of cure. Here are the notes of one of his cases. A man aged 36, the subject of pulmonary tuberculosis and locomotor ataxy, shewed from time to time some small intralingual tumours, the size of a cherry stone, which grew rapidly and were accompanied with itching. The tumours were hard to the feel, elastic, not painful, and usually disappeared in from ten to fifteen days. Generally, they were located within the substance of the organ, although the author has seen one upon the surface, in which case it had

the appearance of a small aneurysmal swelling of a venous nature. It was bluish in colour, firm, and had no thrill. Ten days afterwards all trace of the swelling had disappeared. The nature of these swellings was clearly hæmorrhagic; the absence of thrill, their rapid disappearance, their frequent occurrence seemed to exclude the idea of aneurysm. As to the ætiology the author attributed it to some vascular change, probably due to miliary tubercles. The patient, besides, suffered from frequent attacks of hæmoptysis, and death supervened a short time after the above notes were taken.

H. Percy Dunn.

Bacteriology.

RECENT PAPERS.

442. Claudio Fermi, Dr.—On the Gelatin and Fibrin-Dissolving Ferments and the Amylolytic Ferment of Micro-Organisms. (*Centralblt. f. Bakteriologie*, vol. vii., No. 15, April 5th, 1890.)

Art. 442. *Claudio Fermi on the Gelatin and Fibrin-Dissolving Ferments and the Amylolytic Ferment of Micro-Organisms.*—Dr. Fermi has given a *resumé* of his experiments upon the ferment actions set up by micro-organisms. They are sufficiently important to justify more than a mere note.

A. Peptic Ferments—Gelatin and fibrin-dissolving ferments were proved to exist in connection with the following micro-organisms:— B. anthrax, Koch's vibrio, B. Finkler-Prior, Micrococcus prodigiosus, Micrococcus ascoformis, Bacillus ramosus, B. pyocyaneus, Cheese spirillum, B. Miller, B. megaterium, B. subtilis, and Trichophyton tonsurans, and peptic ferments were actually isolated from nine species; the twelve mentioned above, with the exception of B. anthrax, Micrococcus ascoformis, and Trichophyton tonsurans. The peptic ferments of the micro-organisms were compared with Pepsin, Trypsin, and Papäin, with the following results:—(1) The temperature at which the peptic ferments of the different micro-organisms were destroyed varies in each case—*e.g.*, for M. prodigiosus, 55° C.; B. pyocyaneus, 60° C.; B. anthrax, 65° C.; Koch's vibrio, 65° C.; and B. Finkler-Prior, 70° C. (2) A temperature of 65° C. destroys the influence of papäin on gelatin. (3) Trypsin heated to 50° C., will not act upon fibrin, and, heated to 60° C., will not act on gelatin. (4) The ferment of B. Finkler-Prior at + 4° C., as well as trypsin, does not dissolve fibrin, and in the like manner papäin at this temperature only slightly dissolves gelatin. (5) Papäin and the peptic ferment of B. Finkler-Prior, as well as trypsin, will support a dry heat temperature of 120° to 140° C. for ten minutes. (6) The presence of 5 per mille. of hydrochloric acid solution influences the peptic ferments of Koch's vibrio, B. Finkler-Prior, and M. prodigiosus only upon gelatin, not upon fibrin. Trypsin is entirely deprived of its power of dissolving gelatin by the addition of 5 per mille. of hydrochloric acid. (7) The anthrax ferment also is deprived of its influence upon gelatin by the addition of 5 per mille. of hydrochloric acid. (8) The addition of perchloride of mercury (1 per cent.), carbolic acid 5 per mille., or of a saturated solution of salicylic acid, destroys the ferment influences of Koch's vibrio, B. Finkler-Prior, M. prodigiosus, as well as that of Pepsin (salicylic acid excepted) and trypsin upon fibrin. On the other hand, this is not the case with respect to gelatin. (9) The addition of 30 per cent. of soda solution destroys the influence of the ferments of Koch's vibrio, B. Finkler-Prior, M. prodigiosus, just as little as that of trypsin both with respect to fibrin and gelatin. (10) Pepsin, treated for 48 hours with 10 per cent. of soda solution, is so weakened that, in spite of acidification with 4 per mille. of hydrochloric acid, it has no longer any peptonizing properties. (11) Trypsin, on the other hand, kept for 24 hours in 30 per cent. of soda solution still dissolves fibrin, and after having been kept for five days in 50 per cent. of soda solution still dissolves gelatin. (12) Trypsin, on addition of 1 per cent. acetic acid, will not dissolve fibrin, but will dissolve gelatin. (13) Fibrin which has been kept in 1 per cent. of perchloride, or 5 per cent. of carbolic acid solution, is with difficulty dissolved by pepsin, and is quite unacted upon by other ferments. (14) Trypsin, treated for five days in distilled water, or in solution of thymol, loses its influence upon fibrin, but not upon gelatin. (15) Trypsin, treated for 24 hours with distilled water, or with thymol-water, at 37° C., with or without the addition of soda, no longer acts upon fibrin, although it still acts upon gelatin. (16) The ferments exercise no mutual influence upon one another. Pepsin destroys neither trypsin nor papäin, and *vice versa.* (17) Of 14 peptic bacteria ferments, only five act upon fibrin, viz., B. Finkler-Prior, Koch's vibrio, M. prodigiosus (slightly), Miller's bacillus, and Cheese spirillum. (18) Egg-albumin, blood-serum, and diphtheritic membrane, are with difficulty attacked by the investigated peptic bacteria ferments. (19) The fibrin-dissolving bacteria ferments change fibrin into a body which is not precipitated by heat, but is precipitated by nitric acid. (20) Peptone is neither necessary for the nutrition of the cells of organised nor yet for micro-organisms. In the blood one finds no peptone. (21) Gelatin is much easier attacked by the bacteria ferment, as also by trypsin than is fibrin, and so is to be chosen as a reagent for the demonstration of such ferments. (22) None of the fibrin dissolving ferments act upon fibrin in the presence of hydrochloric acid.

B. Diastase-like Ferments—The following bacteria show, in a *marked degree*, the power of converting starch into sugar; B. anthrax, Koch's vibrio, B. Finkler-Prior, Cheese spirillum, B. ramosus, B. Fitz., B. subtilis, B. megaterium, B. tetragus, and B. Miller. The following show a *doubtful action*:— B. Zopfii, Rabbit septicæmia, B. Typhoid, B. diphtheriæ, and B. phosphor. The following show *only a weak action*:— Fæces bacillus, B. pyogen. fœtidus, B. aceticus, Hay vibrio, Staph. aureus and flavus, B. pneumoniæ, B. violaceus, Glanders bacillus, and Tricho-phyton tonsurans. The following have *no amylolytic action*:—Rose yeast, Thrush fungus, M. ascoformis, M. prodigiosus staphylococcus pyogen. citr., and B. pyocyaneus. Diastase ferments have actually been isolated from the following bacteria:—B. anthrax, Koch's vibrio, B. Finkler-Prior, Cheese spirillum, B. megaterium, B. subtilis, and B. Miller. These ferments, compared with pancreatic ptyalin (Amylopsin), give the following results:—1. A temperature of 37° C. is the best for the action of the amylolytic ferment; it is, however, powerful between 4° and 50° C. 2. Heating to 60° C. destroys the diastase-like action of Koch's vibrio, and to 70° C. that of all the other fungous ferments. 3. Carbolic acid 3 per cent, salicylic acid (saturated solution), and 10 per cent. of soda solution do not destroy the action of these ferments, but 5 per mille. of hydrochloric acid weakens their action. 4. Amylopsin, treated for five days with distilled or thymol water, retains its influence; this is not the case with trypsin. 5. Amylopsin is weakened very much by 1 per cent. of acetic acid and 5 per mille. of hydrochloric acid. 6. Gum arabic, Inulin, Amygdalin, and Salicin are not altered by the action of the fungi. 7. Unconverted starch is converted by the following fungi:—B. Fitz. B. megaterium, B. Miller, Koch's vibrio, B. Finckler-Prior Cheese spirillum, B. violaceus, B. pyogyan fœtid, and M. tetragen. 8. B. subtilis and B. ramosus seem to change starch into sugar, without it undergoing fermentation. Fermentation of the starch without conversion has not been proved for any fungi. 9. No conversion or change of the starch could be shown to be brought about by the M. prodigiosus, Rose yeast, or by other fungi which grow well on potatoes. 10. One and the same fungus can form both a peptic and diastase ferment upon albumin and solid nutritive media, and can call forth the fermentation both of proteids and starch. VINCENT D. HARRIS, M.D.

Dermatology.

RECENT PAPERS.

443. FABRY, DR.—On Onychomycosis Favosa. (*Archiv. f. Derm. w. Syph.*, Heft 1, 1890.)

444. KROMAYER, DR.—On the Anatomy of Prurigo. (*Archiv. f. Derm. w. Syph.*, Heft 1, 1890.)

445. UNNA, DR.—On the Treatment of Leprosy.

446. PATTESON, MR.—On Trichomycosis Nodosa. (*British Journal of Dermatology*, vol. ii., No. 4.)

447. Recurrent Zoster, etc.

ART. 443. *Fabry on Onychomycosis Favosa.*—Dr. Fabry examined microscopically the position of the favus fungus in onychomycosis favosa and found that the achorion (schœnleini) develops in the nails as in the skin amongst epithelial structures, and even after long duration of the disease it does not penetrate into the tissue of the cutis. The growth is most active in that part of the epidermis between the papillæ and the downward projection of the epithelium, from which position the fungus grows upwards into the more superficial layers of the epidermis.

444. *Kromayer on the Anatomy of Prurigo.*—Dr. Kromayer, after an examination of skin excised from four patients suffering from prurigo, came to the conclusion that in order to acquire correct notions regarding the histology of the disease it is necessary to examine freshly excised tissue. He considers that the essential element of the affection consists in a change in the blood vessels in the superficial layers of the cutis and in consequent exudation. The thickening of the horny layer he considers as a secondary consequence of this exudation.

445. *Unna on the Treatment of Leprosy.*—Unna, at Wiesbaden, in April, 1885, drew attention to the treatment of leprosy by ichthyol internally, and the application externally of an ointment of resorcin, 20 per cent., or rather of resorcin muslin. Milton has recently, in a pamphlet, drawn attention to the cure of a case of his by the same treatment, and advises that it should be extensively used, as it is efficacious, economical, and safe. Brooke recently, in his account of a visit to Unna's clinic, in the *British Journal of Dermatology* for April, states that chaulmoogra oil is useless except in large doses, which the stomach will not tolerate, the treatment employed in two cases at present under Dr. Unna's care being, chrysarobin internally, with pyrogallol externally. The chrysarobin is given in a keratin-coated pill, which would not dissolve till it reached the alkaline media of the upper gut, and thus the premature oxidation, as well as the undesirable local action of the chrysarobin on the stomach would be avoided; and, in order to prevent its conversion there into chrysophanic acid, it is mixed with calcium sulphide in the pill, and followed down by free doses of hydrochloric acid.

446. *Patteson on Trichomycosis Nodosa.*—In a note on trichomycosis nodosa, Mr. Patteson groups the distinguishing features of nodose conditions of hair as follows:—*Parasitic* — (1) Trichomycosis Nodularis Jukel-Renoy) Piëdra. (i.) Affects only the hairs of the head; does not occur in this country; most common in Columbia. (ii.) Surface of hair normal between nodes. (iii.) Always nodular; but intervals not regular. (iv.) Hairs of normal strength. (v.) Normal pigment unaltered. (vi.) Nodes are whitish in colour, and of stony hardness. (vii.) Nodes are due to, or associated with, mycelial filaments, and round, oval or hexagonal spores (hyphomycetes, or mould fungi; and zoogloear bodies of red-like filaments of undetermined nature as yet. (viii.) Disease probably determined by want of cleanliness, and greasiness of hair. (2) Trichomycosis nodosa (Patteson) leptothrix (Wilson). (i.) Affects hair of arm pits and scrotum only; may occur in any country. (ii.) Surface dull and rough in parts, as if "worm-eaten;" nodes irregularly disposed, and not uniformly related to axis of shaft, but usually placed laterally. (iii.) Typical form is nodose, but at times, in axilla, and always in scrotum, it assumes a diffuse form extending laterally on both sides of shaft. (iv.) Hairs little, if at all more brittle than normal; if fracture occurs, it is usually between nodes. (v.) Normal pigment unaltered. (vi.) Nodes are yellowish in colour, slightly granular, or homogeneous in structure, and very hard and insoluble. (vii.) Nodes are produced by the development and encapsulation of short, fine bacilli, 1·5μ to 2·5μ in length, with somewhat rounded ends, seldom forming long chains; non-motile. The bacilli penetrates into the cortical substance, and subsequently cause a rupture of its fibres, which, becoming enveloped in the hard encapsulating material, project on the surface, and form the nodes. They belong to the schizomycetes, or fission fungi. (viii.) Probably determined by maceration, due to warmth and moisture of parts. *Non-Parasitic*—(1) Trichorrhexis nodosa (Kaposi); trichoclasis (Wilson). (i.) Usual site the beard and moustache; in rare cases the head (Divergie, Crocker); is not limited to any country. (ii.) Hair normal between nodes, which are uniformly distributed with regard to axis of shaft. (iii.) Always nodular, and with no regularity of interval. (iv.) Hairs have great tendency to break through the nodes. (v.) Normal pigment unaltered. (vi.) Nodes are white and lustrous, and stand out sharply from intervening portion of hair, resembling the "nits" of pediculi. (vii.) Nodes are due to a bursting of the cortical fibres of the shaft and subsequent entrance of air, which causes the whitish colour. The broken ends are like "two brushes stuck into one another." (viii.) Determining cause unknown. (2) Node

hair (Walter G. Smith); monilethrix (Crocker). (i.) Affects hair of head; may occur in any country. (ii.) Surface normal between nodes. (iii.) Always nodular, and with marked regularity of interval. (iv.) No abnormal brittleness. (v.) Pigmentation is chiefly confined to the nodes, which are much darker in colour, and in marked contrast to the intervening portions. (vi.) Nodes are dark and pigmented; intervening portions of shaft colourless. (vii.) Nodes are due to an abnormality of nutrition, full growth of the hair from the papilla of the follicle being intermittent instead of continuous. Analogous to the furrows produced on nails. (viii.) Determining cause unknown. MORGAN DOCKRELL, M.A., M.D.

447. *Recurrent Zoster.*—It has so long been assumed that the subjects in whom herpes zoster has once made its appearance are unlikely to be again attacked by the disease, that text-books ordinarily describe the affection as non-recurrent. That this view of it is not absolutely correct is, however, becoming more and more apparent as observation regarding it becomes more extended; but, on the other hand, there is a possibility that the cases in which the disease recurs may be consequent on the presence of more extensive central lesions than exist in the instances of single attacks. This view is maintained by Dr. M. B. Harzell, in a communication to the *American Journal of the Medical Sciences*, in which he describes a case of herpes zoster affecting a railway *employé*, the first attack having been succeeded by repeated seizures, always in one of the same two situations, viz.: the inner surface of the right thigh, or the back of the thigh and over the sacrum. It was noticed, however, that in several of the attacks both sides of the body became involved, and sometimes the eruption spread even to the scrotum; and Dr. Harzell insists on this bilateral distribution of the disease as one of the principal features distinguishing it from the non-recurrent form of herpes, and as lending strength to the suggestion that it is dependent on the occurrence of lesions centrally situated in the nervous system. The same authority further assumes also, that those instances of labial and perputial herpes in which recurrence is a frequent symptom, are in reality examples of recurrent zoster in which the disturbance is limited to very small nerve branches.

CHAS. H. WADE.

Laryngology and Otology.

RECENT PAPERS.

448. SCHOETZ.—On a Case of Carcinoma of the Larynx. (*Deut. Med. Zeitung*, Feb. 20, 1890.)

449. GRAHAM, DR. DOUGLAS.—On Massage of the Ear. (*Boston Medical and Surgical Journal*, April 3, 1890.)

450. PINS, DR. E.—On a new Method of Irrigating the Nose. (*Wiener Med. Woch.*, 1890, No. 16.)

451. ROBINSON, DR. BEVERLEY.—On the Relation of Peripheral Irritation to Disease as manifested in the Nose and Throat. (*New York Medical Record*, April 19, 1890.)

452. On Foreign Bodies in the Air-passages.—(*The Medical Analectic and Epitome*, March, 1890.)

ART. 448. *Schoetz on a Case of Carcinoma of the Larynx.*—At a meeting of the Laryngological Society of Berlin on December 6, 1889, Herr Schoetz showed a man, 40 years of age, suffering from carcinoma of the larynx. At the end of December, 1888, he complained of cough, pain in the neck, and difficulty of swallowing, and sought advice. Infiltration of the apex of the right lung and tuberculosis faucium was diagnosed, and creosote capsules ordered. As the difficulty of swallowing increased, an æsophageal bougie was passed daily, but without benefit. On March 7, 1889, he came under Schoetz's notice. Catarrh of the apex of the right lung was found; the fauces were healthy. On the back of the right half of the epiglottis, and extending to the right sinus pyriformis, was a tumour the size of a walnut, which at first sight appeared a cyst, but which, on exploring with the sound, was found to be very soft, solid tissue, in which the sound sank. The voice was clear; there was difficulty of swallowing solid food. Microscopical examination showed carcinoma. Surgical extirpation of the tumour was performed by Herr Geheimrat Hahn on the 23rd March. The epiglottis and a piece of the right half of the thyroid cartilage, with the soft, fragile tumour, were removed through the laryngo-fissure. On May 6th the patient was discharged "cured." On the day after he went out, however, Schoetz found a fresh growth the size of a hazel-nut close to the side of the primary swelling. By June 22 the tumour was as large as the first. It continued to grow rapidly, and by the end of July it was three times its original size. Great difficulty of swallowing, suffocative attacks, and sleeplessness had much weakened the patient, who, however, would not submit to further surgical treatment. On August 8, Schoetz began electrolysis, the positive pole being placed on the breast, the negative, as a needle, being thrust into the cocainised swelling. Eighteen sittings were given, two weekly, the strength of the current from 20 to 33 M. A., and the duration of each sitting 20 to 30 minutes; dusting with iodoform afterwards. The cough and all the symptoms have now disappeared. Of the tumour, the size of an apple, there is only left a rudiment about the size of a bean; the larynx and trachea is free. The tubercle on the left false vocal cord and relaxed mucous membrane on the right arytenoid cartilage and right vocal cord, proceed from the laryngo-fissure.

G. D'ARCY ADAMS, M.D.

449. *Graham on Massage of the Ear.*—Dr. Graham describes a method of massage of the ear which he considers more agreeable and efficacious than Hommel's. Hommel's method, as described in the *Archives of Otology* for 1886, consists in rapidly exerting and relaxing pressure upon the tragus, by which he supposes that compression and attraction of the membrane is produced. Graham maintains that Hommel's method possesses no suction action, as the compression of air, which it causes, is so slight that its sudden liberation cannot produce any appreciable vacuum, as claimed by its advocates. The undoubted benefit which has resulted from it is due to the fact that the vessels of the cavity of the tympanum, and the drum membrane, anastomose at the tragus, and that, therefore, alternate compression and relaxation of the tragus produce a pumplike action on these vessels, which draws the blood outwards, and stimulates the circulation. Graham's method is as follows:—The hand is applied to the ear, so that the muscles in front of the metacarpal bone of the thumb, fit accurately into and over the auricle, when, by performing moderately strong circular kneading, in a direction backwards, upwards,

and outwards, powerful but pleasant compression and suction are created, sensible to the hand of the operator, as well as to the ear of the patient. When desired the auricle can be grasped at the same time, by the fingers behind it, and the muscles at the base of the thumb in front, and a circular traction with the strongest pull upwards, backwards, and outwards exerted. These procedures can be advantageously varied and their effect increased by effleurage, or stroking, in front of the ear, and on the side of the neck, which aids the return of blood in the temporal and jugular veins, and hastens the flow in the lymphatics.

450. *Pins on a New Method of Irrigating the Nose.*—Irrigation plays an important part in nasal therapeutics, whether the object be the application of certain medicaments, or the cleansing of the passages. Various methods have been hitherto employed, such as the syringe, Weber's douche, etc., and each has its advantage, but all have certain disadvantages. The most serious disadvantage is the danger of forcing fluid into the frontal sinuses, or the Eustachian tubes. Another disadvantage is the difficulty of preventing fluid from passing down from the naso-pharynx into the lower pharynx and larynx. The contraction of the soft palate, which is spontaneously produced by the passage of fluid over it, is by no means always sufficiently permanent and continuous to prevent the occasional entry of fluid into the larynx. Coughing and choking result, and irrigation is sometimes rendered impossible especially in children. To overcome these disadvantages Pins has devised a special apparatus. This consists of a bottle, of suitable size, with an indiarubber stopper, into which are fitted two glass tubes of different lengths. The larger tube has a wider bore and reaches to the bottom of the bottle, and on its upper end is an olive-shaped nozzle to fit the nostril. The shorter tube does not reach to the top of the fluid in the bottle, and its upper end is bent at an angle, or is fitted with a similarly bent mouthpiece. The patient takes the mouthpiece between his lips, while the olive-shaped nozzle is fitted into one nostril. He then blows, with cheeks distended, into the bottle, by which the fluid is forced up into the nose, and runs out at the other nostril. He is able in this way, with short pauses for rest, during which he inspires deeply, to send one or two litres of fluid through the nose in a few minutes. Halt (*Trans. of the Amer. Otol. Soc.*, 1882) first made the observation, that in the attempt to expire forcibly, with the mouth closed and the cheeks forcibly blown out, the soft palate is contracted across the pharynx so as to cut off the naso-pharynx from the parts below. When, therefore, the patient forcibly blows into the bottle, the expired air meets with resistance, and the naso-pharynx is cut off. The greatest force with which the fluid can enter the nose is equal to the strength of a forcible expiration, and is never so excessive as to involve a danger of the fluid being driven into the sinuses. The soft palate is contracted, and its lower edge is brought into opposition with the pharyngeal wall, and the Eustachian orifice is somewhat narrowed and protected against the entry of fluid. Pins has employed this method in 30 patients, in whom the irrigation has been performed over 400 times, and he has never observed any disagreeable accidents. Children use this method willingly, and can be left to themselves to perform the whole manipulation. The method may, however, be contra-indicated in patients suffering from diseases of the respiratory or circulatory organs.

J. B. Ball, M.D.

451. *Robinson on the Relation of Peripheral Irritation to Disease as manifested in the Nose and Throat.*—The author believes that of late years specialists have attached too much importance to nasal and throat influences in the production of disease. The recognition of the fact that the nasal organ was frequently the seat of diseases that caused peripheral irritation, such as hay fever or asthma, naturally led to the adoption of surgical methods for their relief. The affections referred to are various. Peripheral neuritis of the pituitary membrane, as shown by sensitive areas; hyperæmia of turbinate bodies; thickened or deflected septums; plugging by polypi or adenoid growths. The removal of such conditions rendered the use of the galvano-cautery, the saw, and the trephine a matter of routine. At first radical cure of hay fever was often claimed, but subsequent following up of cases has not justified that assumption. There are instances where cauterization, sawing, or trephining are wholly negative as regards their effects. Some operators argue thus: admitting that hay fever depends upon a neurotic habit and a specific irritant, still the latter would not take effect were the nose in a healthy condition. Occasionally they are correct in the discovery of intra-nasal disease requiring surgical treatment. In many cases, however, nasal symptoms result from morbid processes elsewhere. Finally, local conditions may often be treated by suitable topical applications. The foregoing applies to hay asthma. The writer says unhesitatingly that perennial asthma cannot be frequently cured by the removal of nasal obstruction. Peripheral irritations, such as a loaded rectum or a painful ovary, may precipitate an attack; so may an obstructed nose. In a certain number of cases it without doubt predisposes, and in a very limited percentage is a direct efficient cause of the disease. Dr. Robinson quotes from a former paper: Six out of thirty cases of asthma might be fairly ascribed to intra-nasal obstruction, and all were operated on. Four showed at least temporary improvement in the asthma; there was none in the other two. On the other hand, a large number of cases with pronounced nasal occlusion have no asthma. The explanation that the neurotic element is lacking in such patients was not always evident, for in some of them the nervous temperament was highly predominant. Still, it is true that certain cases can be cured by instrumental procedures. Moreover, mouth breathing interferes with proper supply of air, and also admits it, dry dust laden, to the lungs. Therefore, whenever an operation is required to render the nose permeable, and particularly when there is a tendency to, or confirmed, asthma, it should not be delayed or neglected. Hypersensitiveness of nasal areas may start other reflex symptoms, as photophobia, asthenopia, conjunctivitis, epiphora, contracted eye-lids, recurrent night cough in children without lung complications, cough generally, palpitation, chorea, especially of facial muscles; headache, spasm of the glottis. Hack advises that the upper air tract be examined in all cases of severe persistent headache. The author believes—in common with many authorities—that nasal inflammation may extend to lower air passages. Enlarged tonsils often cause paroxysmal cough or attacks of dyspnœa. He quotes the *Lancet* to the effect that "the study of throat disease has proceeded along very narrow lines, and pathological theories have been formulated upon insufficient and often erroneous data, and made the basis of universal treatment. Some of these theories have been proved to be wrong, while others are, on

the surface, of such an improbable character that they should be received only on the production of irrefutable proof of their correctness." In conclusion he paraphrases Dr. Goodell, "Always bear in mind that men, women and children have some organs outside of their nasal cavities."

452. *On Foreign Bodies in the Air-passages.*—This paper gives an interesting collection of these cases from current literature; the foreign body in many of them being of an extraordinary nature. In the *Lancet* (December 14, 1889), E. F. Grün reports a case where a pea was impacted in the left bronchus. Death occurred suddenly at the end of four weeks. The left bronchus was occluded by the swollen pea, which lay at the bifurcation. Left lung solid and fibrous; right healthy. The author thinks the pea became dislodged into the right bronchus, causing suffocation. Moure gives six cases: in three the body was extracted, in two it was expelled, and in the remaining two proved fatal without surgical interference. Massei, of Naples, relates three cases where accident had escaped observation. In the first a fish bone was seen by the laryngoscope at the level of the third tracheal ring. In the second a chicken bone was found in a lady tracheotomised for œdema glottidis. In the third, after an unsuccessful operation, a piece of beef bone was found below the cords. Hovell removed a piece of bone three quarters of an inch long by forceps from the trachea, just below the vocal cords, where it had been lodged for two months. In another case a quarter of a peeled walnut was coughed up from the right bronchus. Linares publishes (*Journal of Laryngology and Rhinology*, January 1890) an account of a caoutchouc tooth-plate, with two teeth attached, swallowed during sleep. Tracheotomy did not succeed in extracting foreign body, which was ultimately removed by prolonged incision into larynx. Bryant has two cases in the *British Medical Journal*, Juue 15, 1889. In the first a button was found blocking the right bronchus, and causing consolidation of the right lung. In the second, a mouthpiece of a trumpet was extracted on the thirteenth day by forceps passed through a tracheotomy wound. Beverley reports in the same journal, July 6, 1889, a threepenny piece discovered by laryngoscope lying across the vocal cords. Laryngotomy being unsuccessful, thyrotomy was performed. The coin disappeared and was passed nine days afterwards *per anum*. Patient recovered with impaired voice. In another instance a man coughed up a sixpence that he had carried somewhere in his upper air-passages for six months, with no inconvenience beyond occasional cough and pain in the throat. In the *Memphis Medical Monthly*, February, 1890, W. A. Newborn reports a case of cockle-burr in the right bronchus, expectorated after 22 months—patient dying two months later of lung mischief. In same journal H. W. Tate gives five cases; two ended in spontaneous expulsion, two were saved by tracheotomy, and another died in spite of the operation. In the *Medical Bulletin*, O. B. Gross found a marrowfat pea (*post-mortem*) in the left bronchus. McEwen relates a case in the *Glasgow Medical Journal*, December, 1889, where he removed by tracheotomy the shell of a hazel-nut from the posterior wall of the trachea. *Peoria Medical Monthly*, November, 1889: F. E. Waxham reports tracheotomy on a child of 15 months. The vertebra of a fish with two projecting spines was removed. Breathing being still impeded, an intubation tube was inserted. As this was being done, a second vertebra was expelled through the wound. The same writer tells of a shawl pin successfully removed from the right bronchus after three months. J. A. Thompson publishes in the *Cincinnati Lancet-Clinic* an account of an oyster shell coughed up from the larynx, where it had been retained for three or four months. In the *North Carolina Medical Journal*, December, 1889, K. G. Battle gives details of a "sand-spur," a prickly involucre, removed, after four days, by forceps from a boy's larynx. A history by C. H. Knight is given in the *New York Medical Journal*, November 23, 1889. A tooth-plate was removed from the larynx after 16 days, having caused, so it was thought, irreparable damage to the vocal cords, with permanent aphonia. The case is still under observation, and it is now noted that the gap in the cords is almost filled up. On abduction it is quite apparent, but on adduction the cords meet almost perfectly. The patient speaks in a low-pitched, rather hoarse voice; matters being complicated by a small growth in the anterior commissure.

DAVID WALSH, M.D.

Diseases of Children.

RECENT PAPERS.

453. ALLEN, DR.—On Diabetes Mellitus in Children. (*Archives of Pædiatrics*, 1889.)

ART. 453. *Allen on Diabetes Mellitus in Children.*—Dr. Allen reports two cases of diabetes occurring in children. The first case was a boy, aged 3½ years, a very bright child, who had previously enjoyed good health—his father and mother were healthy, but the latter somewhat nervous. The patient, six months before being seen, was noticed to pass an unusual quantity of urine, occasionally wetting the bed. He was now weak and peevish, very thirsty, skin dry, limbs cold, and was passing four quarts of urine in 24 hours; the specific gravity was 1028, and it was found to contain sugar. A week later the patient had lost flesh and strength, and had taken to his bed, and slept most of the time, being very intelligent when aroused. He was not very thirsty, but was very hungry. He rapidly failed and died, living only about seven months after having first being noticed to pass more urine than natural. At the *post-mortem* there was some increase in the amount of subarachnoid fluid, and slight opacity of the lining membrane of the lateral ventricles of the brain. The brain was unusually large. The second patient was a boy seven years old, father and mother healthy, but his great-uncle and two great-aunts had died in middle life of diabetes. During the past six weeks, the patient was languid and thirsty, rising many times each night to micturate. His appetite was excessive, but he was very thin. Three quarts of urine were passed each day. Specific gravity 1040, containing a large amount of sugar. This patient died about three months after he was first seen. [Diabetes in children according to West, is very rare; he quotes Prout, who out of his large experience had only seen one instance of diabetes in a child of five years old, and only twelve in young persons between the ages of eight and twenty years, out of a total of 700 cases. *Rep.*]

FRANCIS HAWKINS, M.B.

Toxicology & Medical Jurisprudence.

RECENT PAPERS.

454. ON NAPHTHALINE INTOXICATION.—(*Archives de Neurologie*, March, No. 56.)

455.—STEVENSON, DR.—On Carbonic Oxide Poisoning by Means of Water Gas. ("Guy's Hospital Reports," vol. 46.)

ART. 454. *On Naphthaline Intoxication.*—Attention is drawn to a new form of drunkenness, which is experienced by the employés in the guttapercha works, where naphthaline is used to clean out the large coppers. The sensations procured by this drunkenness, are said to be so delicious as to surpass those from opium or the haschish. MORGAN DOCKRELL, M.A., M.D.

455. *Stevenson on Water Gas Poisoning.*—In the current volume of the "Guy's Hospital Reports," Dr. Stevenson has given a full report of the two fatal cases of water gas poisoning which occurred at Leeds last autumn. The victims, aged 54 and 36 respectively, were in the employ of the Leeds Forge Company, where water gas is made and used both for lighting and warming purposes. They occupied a cabin of 540 cubic feet capacity, and were found dead in it one afternoon about 2.30 P.M., they might have been dead about two hours. It was found that the gas jets for their cooking stove were turned on, but the stove was cold and the jets were not alight; there was no perceptible odour in the cabin. The bodies were removed to an adjoining room, and the autopsies were fixed for two days later. Several medical men and two students attended, when just at the commencement some of them were taken ill, the one most severely affected became completely unconscious and was convulsed, and did not recover for some hours, the others were less severely affected, but all present experienced some feelings of illness, and the autopsies were postponed. It was subsequently ascertained that several gas jets in the room were incompletely turned off, so that a large escape of the gas was taking place into the room, but being odourless its presence was only recognised by its effects. The *post-mortem* examinations were made at a subsequent date, when the typical appearances of death from carbonic oxide poisoning were found, consisting of a rosy hue of the viscera, *post-mortem* hypostases, a fresh appearance of the viscera, and the exudation of rosy blood-stained fluid into the stomach bladder and cranial cavity. The apparent freshness of the viscera was a most striking feature, and was still manifested more than a month later. Blood pigment charged with carbonic oxide was found in the pericardial and pleural fluid, in the contents of the stomach and in the urine.

Syphilography.

RECENT PAPERS.

456. LÜBARSKY, DR. I. M.—On a Case of Syphilitic Re-infection. (*Meditzinskoie Obozrenie*, No. 1, p. 33, 1890.)

457. BATASHOFF, DR. I. S.—On Non-Venereal Syphilitic Infection in Country Practice. (*Meditzinskoie Obozrenie*, No. 1, p. 18, 1890.)

458. CRIVELLI, DR.—On a Critical Review of Results after Excising Hard Chancres. (*International Med. Congress* of Australasia.)

459. HOCHSINGER, C.—On the Destiny of Congenitally Syphilitic Children. (*Centralb. f. d. Med. Wissenschraft*, No. 16, 1890.)

ART. 456. *Lübarsky on Syphilitic Re-infection.* –Dr. I. M. Lübarsky, of Minsk, relates the following exceedingly rare instance of syphilis occurring twice in the same subject:—In a weakly soldier, aged 34, early in December, 1888, three or four days after coition, there appeared a single soft chancre situated on the external layer of the foreskin, close to the frenulum. Shortly afterwards there supervened a chancroid suppurative bubo in the right groin, which was duly incised, &c. In about three weeks both the wound and ulcer soundly healed, but the preputial scar soon became sclerotised to transform subsequently into a typical Hunterian chancre, while there appeared an indolent big-sized bubo in the left inguinal region, and later on, in March, 1889, syphilitic roseola and angina, with enlargement of the cubital and cervical glands. Under the influence of a mercurial treatment (consisting in the intra-gluteal injection of the "suspension": ℞. Hydrargyri bichlor. corrosivi, 2·0; Olei Vaselinici, 60·0. M.D.S. A Pravaz, syringeful once a week), all the manifestations disappeared (after 10 injections). A careful inquiry elicited the following facts concerning the preceding history of the patient:—In 1878, during the Russo-Turkish war, the man, when staying in Roumelia, had contracted a hard chancre of the frenulum, which had made its appearance in three weeks after coition with a prostitute. The ulcer was "cured" in two or three weeks, to be followed, a month later, by syphilitic angina and roseola, with an universal enlargement of lymphatic glands. After a course of mercurial frictions (40 in number), the symptoms vanished. In 1879, he had a return, limited to moist papules about the scrotum and anus, which promptly disappeared after another course of the same treatment. In 1880 there developed severe manifestations of tertiary syphilis, which induced him to undergo a prolonged treatment by sulphur baths (at Pîatigorsk, Caucasian Russia), mercurial inunctions, decoctions, iodide of potassium, &c., with the result that he was pronounced "radically cured," and, in fact, remained quite well during the subsequent eight years, *i.e.*, up to the re-infection. [A similar case of syphilitic re-infection has been recently reported by Dr. V. I. Razümoff, of Moscow; *vide* the *British Journal of Dermatology*, Aug., 1889, p. 350. Of other Russian authors instances of the kind have been published by Drs. Zabolotsky, Gugencerger, and Pospeloff.—*Rep.*]

457. *Batashoff on Non-Venereal Syphilis.*—Dr. I. S. Batashoff, of Anishina, a country (*zemsky*) practitioner, emphatically argues that, as far as the Russian rustic population is concerned, syphilis is spreading mainly in a non-venereal way, the primary sore appearing accordingly most frequently in this or that extragenital region of the body. In such cases, the disease is transmitted through using spoons (or any utensils) in common, through kissing, promiscuously employing various articles of wearing apparel, etc. The typical case is said to be this:—A soldier, who has been duly "cured" from syphilis in the town, returns to his native village to stay with his family for a while. During such visit a recurrence occurs, and then he communicates the disease to his wife, the latter to

their children, and ultimately all who happen to live at the same hut become similarly infected, to transmit the affection to other villagers (during feasts and on such like occasions). Not unfrequently some peasant woman brings the infection to her village from a town where she has been in service, and similarly becomes the primary source of a local syphilitic epidemic, which, in course of time, transforms into an endemic. "All such ways of spreading syphilis," the author says, in conclusion, "all anti-hygienic surroundings of the peasant, overcrowding, &c., easily explain the appalling fact that there are only too often met whole villages affected by syphilis, and inhabited by a hopelessly sickly, weak, and steadily degenerating population. Verily, terrible is this triumphant advance of the modern scourge in Russian villages."

VALERIUS IDELSON, M.D.

458. *Crivelli on a Critical Review of Results after Excising Hard Chancres.*—Dr. Crivelli read an elaborate paper upon this subject which is reported at pages 241, *et seq.* Four hundred and sixty cases are reported of which three hundred and thirty-five were failures. The so reputed successful cases are not to be relied upon, for nine chancres have been known not to have been followed by secondaries. Amongst the cases which are accounted as successes by the partisans of the abortive method, some are found in which the patients have previously had chancres. It is a question as to whether these were Hunterian, and if the authors have not excised as initial sclerosis one of those ulcerations of the penis which cause so many errors of diagnosis, when one does not know about the antecedents of the patient. Moreover, the time during which the patients were under observation, after the operation has been in most instances too brief. Ricord speaks of six months, Auspitz of four, but cases can be found where secondary accidents have appeared twelve months after the first appearance of the chancre. Even the conditions of this period of observation seem to lack the necessary strictness required for the affirmation of a scientific fact. Most of the patients were not retained in hospitals; as soon as excision had been performed and healed, they returned to their homes, and only interviewed the doctor several months after. Syphilitic symptoms may have appeared, and disappeared, during this time. However attentive these patients may have been, the necessary knowledge to recognise and judge these symptoms could not have been theirs. An instructive series of papers upon the subject can be consulted by reference to the "Medical Digest and Appendices," sections 1188: 5.

RICHARD NEALE, M.D.

459. *Hochsinger on the Destiny of Congenitally Syphilitic Children.*—The author followed the careers of 265 children affected with congenital syphilis, for some years. On the whole, over a third suffered relapses, more than 70 per cent. of these relapses occurred in the first year of life. Amongst these children, 63 were kept in view for over four years, some for twenty years. Mercurial treatment was adopted in all the cases between the second and the fifteenth month after birth. The 63 cases are thus divided:—1. Ten showed fresh syphilitic appearances within the time specified (over 4 years), the oldest of these was 12 years old. 2. Another group comprises 18 who remained healthy in every respect. 3. Finally, the remaining 25 showed no evident signs of syphilis, but some of them have the visible marks of a hereditary infectious disease (small sunken nose, radiating cicatrices, &c.), and others were affected by a general or undetermined morbid condition (anæmia, debility, &c.) None of the cases showed any direct connection between syphilis and scrofula. As to the forms of the relapses, during the three first years of life the cases showed almost exclusively condylomatous eruptions of the skin and mucous membranes; during the fourth and fifth years gummatous ulcerations or bone disease as well as condylomata; above this age only gummatous changes. Lues laryngis was repeatedly seen between the ages of two and four years, and two of the children (in the third year of life) had hydrocephalus. Severe gummatous destruction was only once seen, in a child eight years old; in this case the first treatment had begun late (at the age of 15 months), and had not been thorough. In conclusion, the author thinks the prognosis of congenital syphilis not unfavourable, but largely dependent on the treatment (primary). The earlier mercurial treatment is begun, and the more carefully it is followed out, so much the more certain is a definite cure without relapses. The treatment should continue at least a fortnight after all syphilitic symptoms have ceased. Lingering syphilis in the child's system is shown in another way than by relapses, viz., by lowering the resistance against intercurrent diseases.

E. J. EDWARDES, M.D.

Ophthalmology.

RECENT PAPERS.

460. RUDALL, J. T.—On a Case of Glaucoma, in which Iridectomy appeared to be Hurtful. (*Internat. Med. Congress*, p. 768.)

461. WECKER, DR. DE.—On Tuberculosis of the Uveal Tract. (*Le Progrés Medical*, April 19, 1890.)

462. EALES, MR.—On the Treatment of Cataract. (*Birmingham Medical Review*, May, 1890.)

463. ABADIE, DR. CH.—On the Pathogeny and New Treatment of Sympathetic Ophthalmia. (*Annales D'Oculistique*, March-April, 1890.)

464. GIFFORD, H.—On a New Dressing for Cataract Extraction. (*Knapp's Archives for Ophthalmology*, XIX. i. 41.)

ART. 460. *Rudall on a Case of Glaucoma, in which Iridectomy appeared to be hurtful.*—The patient, being in poor circumstances, was admitted into the hospital, and an upward iridectomy performed on March 20. As it would not have been possible to use the ordinary lance knife with great risk of wounding both iris and lens, a very narrow knife (De Wecker's) was employed, and with it a satisfactory though slow upward section of the cornea was made. She was for a time relieved from pain, but when the eye was opened, two days afterwards, vision was found to be quite abolished. Soon, the tension, which had been temporarily reduced by the irridectomy, became as high as before, and pain also returned. Subsequently the scar became cystoid, and although sight was irrecoverably lost, a second iridectomy (downwards) was performed, in the hope of relieving pain and tension. This proceeding had very little immediate effect, and she had to remain under supervision for a considerable period. It is difficult to explain satisfactorily why in this instance the operation of iridectomy proved futile, if not even injurious; for it seemed improbable that the disease, left to itself, would have caused absolute loss of perception of light in so short a time as four or five days. RICHARD NEALE, M.D.

461. *Wecker on Tuberculosis of the Uveal Tract.*—At the recent meeting of the Ophthalmological Society of Paris, M. de Wecker made some interesting remarks upon tuberculosis of the uveal tract. According to him the knowledge which we now possess of the mode of transmission of tuberculosis and of its propagation have rendered it necessary for us to modify our views in regard to tuberculosis of the eye. It is not a question of ectogenous infection in the case of the organ of vision; the bacilli, having found the way into the body by the respiratory passages, become lodged in the eye as a "point of fixation." The author appears from this to hold that tuberculosis of the eye is a secondary affection, and not a primary one, and he apparently does not believe in the idea that the infection can become disseminated from a local deposit of tubercle on the ocular tissues. The infection localised to the eye, he says, may disappear, and interference if carefully carried out, may be followed by a cure. Some notes of cases illustrative of his views are subjoined. In one case he excised a deposit of tubercle in the iris of a boy of eight years of age. After the operation he was able to demonstrate that the disease extended to the ciliary body. The eye became less irritable and the vision was improved. Another case was that of a girl of twelve, a tuberculous deposit being present upon the iris and involving the ciliary body. Despite, however, the fact that a good deal of pain was complained of, the author refused to enucleate. After three months' treatment with arsenic and iodoform, great improvement took place in her general health, and the author asserts that the tuberculous deposit is spontaneously vanishing. In a third case, in which the same symptoms of tuberculosis were present, immediate enucleation was recommended by Galezowski, with whom the author had a consultation. This recommendation, however, was not carried out and the patient is now in the best possible health. He makes the following deductions from these facts, namely, that it is advisable to interfere when the tubercle is circumscribed, and it is best to abstain from any operation when the disease involves the whole of the anterior part of the uveal tract. In the discussion which followed Despagnet observed that the results above mentioned were encouraging, but they mainly referred to tubercle which was localised to the iris. It is impossible always to be certain when the disease was distinctly circumscribed. In a small child, whom he had seen, the tuberculous deposit had its origin in the ciliary region, but was only visible in the pupillary area. In the opinion of Parinaud the diagnosis of tubercle of the iris, in a large number of cases, can be made with certainty; there were often in the neighbourhood of tubercle, granulations, the development of which was characteristic. These, at first greyish, subsequently became yellowish in colour, and after increasing in size, somewhat, ultimately withered, and then the signs of tubercle became apparent. Coincidently with this a deposit of tuberculous matter formed in the anterior chamber, simulating hypopion. The striking indolence, too, of iritis or kerato-iritis was characteristic of a tubercular origin. With regard to the fact of dissemination in ocular forms of the disease he had had two patients in whom no evidence of tuburculosis had formerly existed. Both of them died within two years of phthisis. Surgical interference is certainly called for when the ocular tuberculosis appeared due to primary origin. Vignes remarked that he had seen a tubercular abcess of the orbit followed by death in an infant of six weeks after enucleation of an eye, the vitreous of which had undergone caseous degeneration, and of which the optic nerve was involved. Chauvel said there was no object in saving a tubercular eye of which the vision was lost, and if the disease showed any tendency to involve the whole organ, enucleation, in his opinion, should be resorted to. If the tuberculosis was localised to the iris, excision of the disease might be performed. Wecker, in reply, adhered to his belief that the eye became infected from some other part of the body, and, therefore, in his opinion, enucleation of the organ could not prevent, in any case, dissemination of the disease.

462. *Eales on the Treatment of Cataract.*—The subject of the treatment of cataract is always of interest to the ophthalmic surgeon, and in the paper before us Mr. Eales mainly discusses the plan he follows in regard to the treatment of immature cataracts. The author states that in his opinion by far the best method of dealing with immature cataracts is Förster's. This consists in performing an iridectomy upwards, and then, while the anterior chamber is empty, in subjecting the lens to a complete process of massage, by stroking the anterior surface of the lens through the intervening cornea against which it then lies, with a squint-hook or curette, or other similar instrument. The stroking is done by circular movements as well as by radiating ones in all directions, taking care, by keeping the pressure gentle but firm, to prevent the iris from intervening between the cornea and the lens when stroked. By this means the iris will recede in all directions before the stroke of the curette, and the lens can be bruised almost to its periphery without injuring the iris, which is pushed aside with the strokes; so much so, that if there were any posterior synechia present, not too firm, the adhesions may thus be broken down. This finished, atropine is instilled, and the eye bandaged. It is then recommended to apply atropine to the eye three or four times a day, for, says the author, he has very often found the iris adherent to the lens capsule at two or three points, without any appearance of iritis, injection, or pain. The adhesions generally disappear on the second or third day at latest; after this procedure the lens rapidly matures, and evidence of this may be seen so early as the second day, and generally by the third or fourth, and becomes complete in two or three weeks. The author prefers to delay extraction till the fourth or sixth weeks, in order to give ample time for the primary wound to heal and become consolidated. The anterior chamber was noticed to become often distended and shallower after this procedure, but no increased tension was ever present, a fact which is probably due to the iridectomy. The diminution of the anterior chamber is doubtless partly dependent upon moderate swelling of the lens, and partly to its advance. The chief dangers of Förster's method appear to be iritis, glaucoma, and loss of vitreous at the extraction. The author has operated after this manner some 25 times within the past six years, without losing a single case or having any bad result, or the necessity to needle afterwards for opaque capsule. He has, however, only employed it in cases of nuclear cataract, with opacity commencing in the cortex, the cases described by Förster as the most favourable for the operation.

463. *Abadie on the Pathogeny and New Treatment of Sympathetic Ophthalmia.*—The author affirms his belief in the microbian origin of sympathetic ophthalmia, and explains for the progress of the disease by saying that the microbes gain entrance to the eye through the wound of the injured organ, make their way into the deeper structures of the eye, penetrate as far as the chiasma, and finish their course by involving the optic nerve on the opposite side. This in brief is the text of his paper. He then proceeds to discuss the question of enucleation in cases of sympathetic ophthalmia, and advances the opinion that by rigorous antiseptic precautions all microbic infection can be avoided, and enucleation of the injured organ rendered unnecessary. When sympathetic ophthalmia has supervened, instead of enucleating the exciting eye he suggests injecting into the anterior chamber of the latter one or two drops or more of a sublimate solution, 1 in 1,000. The injections provoke, he says, a considerable amount of reaction, but this gradually subsides, and improvement ensues in both eyes. He subjoins the notes of the following case:—A woman, aged 60, fell and severely injured her left eye. On examination, a large rupture of the sclerotic was found midway between the corneal margin and the equator of the globe; through this rupture the lens had escaped, and part of the ciliary body was protruding. The wound was carefully touched with 1—2,000 sublimate solution, and antiseptic dressings were applied. The patient insisted upon resuming her occupation, and neglected to attend regularly to have the dressings reapplied. All went well for a time, but at the end of three weeks she returned with sympathetic ophthalmia well developed in the opposite eye. Before proceeding to enucleate the exciting organ, the wound in which had healed well, the author resolved to carry out the treatment to which reference is made above. With this object, therefore, he cauterised with the galvano-cautery, the slight prelapse of the ciliary body which was barely perceptible, and then with a Pravaz syringe injected into the injured eye two drops of a sublimate solution, 1 in 500. The reaction was excessive, the pain distressing. The next day the globe was deeply injected, and the posterior layers of the cornea with Descemet's membrane were opaque. Little by little, however, the reaction subsided, the cornea recovered its transparency, and at the same time the vision in the sympathising eye rapidly began to improve. In brief, after 15 days, not only was the vision of the sympathising eye restored almost to normal, but the existing eye itself recovered to the extent that the patient could count fingers at several metres, and by it she was able to see her way about. Practically, four months after the procedure detailed above the cure was complete, and the vision of the wounded eye with + 15D correction was such as enabled the patient to read. Another case is recorded—that of a boy, aged 14, in whom, after some slight injury of one of his eyes, sympathetic ophthalmia developed. The state of the vision is not given, but the author observes that it was so reduced as to be almost the same in each eye. Into the injured organ an injection of two drops of a sublimate solution, 1 in 1,000, was effected. The reaction was much less marked than in the first instances above quoted, and in the course of a few days considerable improvement in vision took place. The author observes that in view of these facts he thinks he is justified in saying that the treatment of sympathetic ophthalmia may now be regarded as entering upon a new phase.

H. PERCY DUNN.

464. *Gifford on a New Dressing for Cataract Extension.*—This method is an attempt at securing what are supposed to be the advantages of the so-called open method of treating cataract wounds, without the risks attending it. The advocates of the open method hold that the pressure produced by the ordinary pad and bandage is injurious, and that the best splint for a wounded eye is furnished by the eyelids, which may be held in position by strips of strapping. We do not propose to discuss here the truth of these views, but it must be admitted, even by their most ardent advocate, that the risks of accidental injury are increased by discarding the pad or bandage. The author proposes to obviate these risks by placing a rigid cardboard shield, concave towards the eye, to protect it from accidental blows; the shield is of sufficient size to rest upon the bones round the orbit. We much doubt whether there are many in this country adopt the open method of treating cataract operations; but if there are, it is to be hoped that they will adopt this precaution, which, as it seems to us, diminishes its risks.

W. ADAMS FROST.

Reviews.

ARTICLE 465.

Transactions of the Royal Academy of Medicine in Ireland, vol. vii., 1889. Dublin: Fannin & Co.

THE annual volume of the "Transactions of the Irish Royal Academy of Medicine" for the year 1889, reports a flourishing condition of the Association, both as regards its membership and its financial position; and it also affords, by the character of the communications contained in it, valuable evidence of the important work it accomplishes in forwarding the study and practice of medicine and surgery. The volume opens with a paper by Dr. Athill, on the action of certain drugs on the utero-ovarian system, in which the author sustains the value of ergot as a preventive of *post-partum* hæmorrhage, when administered prior to parturition. In dealing with the reputed emmenagogues, he offers evidence against the usually sustained theory of the operation of these substances, and presents a good deal of sound reasoning in support of his own views on the question. Dr. C. G. Nixon records an interesting case of mixed typhus and typhoid fevers; and Dr. M. F. Cox one of acute endo- and peri-carditis, the main lesson taught by which is that long-continued rest, aided by repeated blistering and administration of the iodides of potassium and mercury, followed by iron, is the treatment most to be relied on in such cases. In the surgical section of the volume cases of cholecystotomy are described by Drs. W. J. Smith, C. C. Ball, and Kendal Franks; one of non-malignant pulsating tumour of bone, by Dr. R. McDonnell; and several other interesting clinical contributions are included, among them being one on tubercular joint disease, by Mr. J. S. McArdle, and another on tubercular peritonitis, by Mr. R. O'Callaghan. In an essay on the treatment of extra articular suture of fractured patella, Mr. Myles advocates this plan on several grounds, and condemns the use of Malgaigne's hooks, as recommended by Mr. Treves, as well as Volkmann's method of passing a wire ligature through the quadriceps and the ligamentum patellæ. A case of leprosy, illustrated, from the pen of Dr. O'Carroll, and one of epithelioma in the horse, by Dr. Patterson, are among the pathological papers; a report of the investigation committee on anatomical facts observed in the anatomical department of Trinity College, concludes a volume of considerable and abiding value for future reference.

ARTICLE 466.

Chronic Urethritis. By MATTHEW BERKELEY HILL, F.R.C.S. London: Lewis, 1890.

MR. BERKELEY HILL has collected and revised the lectures delivered by him before the Royal College of Surgeons on chronic urethral inflammation and its treatment, the result being a handy *resumé* of the subject, which will be certainly found of great service by such as avail themselves of the help it affords. By means of a numerous series of coloured illustrations, the appearances of the affected urethral mucous membrane under different conditions, as seen by endoscopic examination, are clearly depicted; and in the text an explanation of the morbid changes so demonstrated is given. The symptoms and treatment of chronic urethritis then come under review, and in the third and concluding lecture, the subjects of prostatitis and tubercle of the prostate are described. Mr. Hill speaks very favourably of the employment of cocaine in a 10 per cent. solution, as an aid to the painless passage of instruments through the urethra of sensitive patients and he insists on the comparative uselessness of such drugs as sandal wood, copaiba, cubebs, etc., in the treatment of chronic urethritis, particularly of the penile portion of the canal, the local treatment of which he regards as alone capable of effecting the desired cure; such local treatment comprises dilatation of each urethral induration as demonstrated by endoscopic examination, and the application thereafter of nitrate of silver in a solution of 10 or 20 grains to the ounce. The results thus obtained are more satisfactory than those otherwise procurable; and the publication of these lectures will doubtless materially aid in the extended adoption of a method of procedure which is shown to be attended with a large amount of success.

ARTICLE 467.

A Study of Doses. By WILLIAM SHARP, M.D., F.R.S.

"A STUDY OF DOSES" is the title of the essay, numbered lvii., in which the author quotes numerous experiments carried out at his request by several correspondents on themselves, with a view to testing the effects produced on the system by minute doses of active drugs, such as opium and castor oil. The object of the work appears to be to encourage further research in the direction indicated, and to lead up to the foundation of a system of dosage, to which the name "antipraxy" is given, the principle of which is, that remedies which in large doses disturb the healthy condition of various organs, will, when these organs are diseased, restore their functional integrity if administered in exceedingly minute quantities. Antipraxy may, in a word, be regarded as a substitute for homœopathy, but a substitute, according to its founder, which is founded on a solid basis of scientific reasoning and examination. However indisposed we may be to accept the inferences deduced from the observations recorded in the pamphlet, it is impossible not to admire the conscientious attention which appears to have been paid to the due carrying out of the experiments detailed; and while waiting further evidence in proof of the claim that constipation is curable by one hundredth of a drop doses of opium, or that castor oil in single drop doses will relieve diarrhœa, we may still welcome the inquiries which have resulted in the foundation of these theories.

ARTICLE 468.

Lectures on Bright's Disease. By ROBERT SAUNDBY, M.D., Edin. London: Hamilton, Adams & Co.

THE well known labours of Dr. Saundby, of Birmingham, in connection with the clinical and pathological history of renal affections not unnaturally leads us to expect that a work from his pen on the subject of his special studies will exhibit many features of interest and importance. Nor is such expectation likely to be disappointed on the part of any one who peruses the volume in which Dr. Saundby presents his views of Bright's disease; it is an able and luminous essay on this oftentimes obscure and puzzling affection. The work opens with a section on general pathology, wherein the signification of albuminuria as a symptom is clearly discussed, and the true importance attachable to this often abused indication is pointed out. It is satisfactory to find so competent an authority as our author finally endorsing the views which attribute only their legitimate degree of significance to those conditions of physiological albuminuria which do undoubtedly co-exist with the normal physique; and the examples of the condition which Dr. Saundby gives us from his own experience are highly interesting and suggestive; and his whole discussion of this important detail may be strongly recommended to all desiring full and accurate information respecting it. In the chapter dealing with cardio-vascular changes, Dr. Saundby gives prominence to and accepts the explanation of Hamilton that increased capillary resistance results from alterations in the specific gravity of the blood serum, and the full consequences of such adhesion are pointed out and defended in the text. In his discussion of the pathology of polyuria, Dr. Saundby gives increased permeability of the glomerular walls as one of the factors determining the increase of urinary flow; and in treating of uræmia he urges the importance of remembering that the intestine is a channel whence elimination may proceed while the renal function is in abeyance, and that failure of its action must necessarily be an additional factor of danger in Bright's disease. Of the curability of the retinitis observed in the later stages of the affection, our author is not able to speak very hopefully, the prognosis being in his opinion bad, except in those cases of albuminuria occurring during pregnancy, and which usually tend to recovery. The second section of the book, on the clinical examination of the urine is very full and complete, and, taken in connection with the rest of the work, it will be found of great value to all who are called upon to make an investigation into the condition of suspected samples of urine. The concluding portion of the book is devoted to a consideration of Bright's disease, of which the history, classification and ætiology are first discussed, and then the general anatomy of the kidney is described as introductory to a study of the diseased conditions of the organ, febrile nephritis, lithæmic nephritis, obstructive nephritis, and the various complications observed in association with these lesions. The chapter on treatment is a very useful and suggestive *resumé*, which derives much advantage from the pains which Dr. Saundby has taken to embody in it the best results of his own large experience; and indeed the whole work gains largely in value and importance from this personal inspiration of its pages. We strongly commend it to the notice of practitioners, who will gather much from its attentive perusal. CHAS. H. WADE, M.D.

ARTICLE 469.

Schoendorf on the Influence of Water-drinking on the Excretion of Uric Acid. (Pfeüger's Archiv. XLVI. s. 529.)—The food taken during these observations was not accurately determined, but was of fairly uniform quality: the uric acid was estimated both by Fokker's and Salkowski's methods; the urea was estimated volumetrically by mercuric nitrate. The following was the result: while on normal days the average uric acid excretion per diem was 1·184 grammes, this amount became 0·9312 g. when 2,000 ccm. of water were taken daily; with 4,000 ccm. (4 litres), 1·0162 g.; with 1,000 ccm., 1·1428 g.; the average of all the days of the use of water being 1·0301. Water-drinking, then, according to the author, has no influence on the excretion of uric acid. On this point Salkowski, who reports the paper in the *Central f. d. Med. Wssi.*, No. 16, 1890, remarks as follows: "This conclusion is hardly accordant with the figures. The uric acid on the several days was as follows: 1·2565, 1·2595, 1·1948, 1·0004, 1·0187, 0·8551, 0·7551, 1·1110, 0·9344. The last six of these sets of figures belong to the first series of water days, with two litres per diem, and it almost seems as if the uric acid was diminished under the influence of this, unless we suppose, what is probably the case, that the diluted urine afforded too low an estimate, with the method employed. The preliminary normal period—viz., of three days—is evidently too short." The excretion of urea on the normal days averaged 18·5 grammes, during the use of water it ran to 21·366 grammes. But the author will not draw any conclusion from these figures, the methods being not precise enough. ("Moreover, the nitrogen supply is unknown."—Salkowski.) The result at which Genth arrived—viz., that under a copious supply of water the uric acid disappeared entirely, evidently rests on erroneous estimations.

ARTICLE 470.

THE *Revue Internationale de Bibliographie*, compiled by Dr. Jules Rouvier, of Beyrouth, Syria (Paris: Lechevalier), the first volume of which has just reached us, is to be a periodical record of articles, contributions, and books bearing on medical, pharmaceutical, and veterinary topics. As the author points out, the advance of science daily throws additional light on questions heretofore obscure; yet few of those who are most interested have the time or the courage to undertake the bibliographic researches which alone can enable them to profit by the experience of others. Even if time and courage are not wanting, such researches must of necessity be incomplete, for no single library can be expected to contain all the works published by *savants* all over the world. The author, with an abnegation which does him credit, has imposed upon himself the arduous task of recording and arranging the titles of all contributions to medical journals throughout the world, hoping thereby to facilitate researches, and thus to aid in the spread of knowledge. Naturally, the first number of such a compilation is almost of necessity incomplete; but when one considers the enormity and scope of the labour involved, one is disposed to congratulate the author upon the measure of success that he has achieved, rather than cavil at shortcomings, the more so as he promises to remedy any *lapsus* in the next number, in suchwise that the volume for 1890 will contain a complete list of contributions published since October, 1889. We would commend this valuable work to the notice of literary men, and to the committees of medical libraries, since the saving of time and labour which it effects must be enormous.

ARTICLE 471.

THE sixth edition of Mr. Martindale's well known *Extra-Pharmacopœia* (H. W. Lewis, 1890), with medical references, and a therapeutical index of diseases and symptoms by Dr. W. Wynn Westcott, while it leaves us little to add to the very high opinion which we have already on various occasions expressed of its merits and value—an opinion which has been enthusiastically endorsed by the medical profession—shows very clearly the tendency of modern therapeutics. The authors point out that, although both quinine and morphine have been at an unprecedentedly low price during the last two years, their place has been largely taken by the derivatives of the aromatic series, the mere enumeration of which is proof of the activity of the chemist and the innovating spirit of modern medical practice. This edition has been brought well down to date; and even drugs of such recent introduction as exalgine, find a mention. Due caution is shown in apportioning the dosage of these new and comparatively untried remedies, a prudence which is certainly commendable in the light of experience. Seeing that but few of these drugs are likely to receive official endorsement in the British Pharmacopœia for some time to come, the summary but reliable indications which are given of their action and doses cannot fail to prove exceedingly useful to those who show a becoming diffidence in accepting, as a worthy guide, the highly coloured results embodied in trade circulars and the like. Altogether, we are told, about fifty pages have been added; but, as the pruning knife has been judiciously employed elsewhere, the work preserves the convenient dimensions which have, in no small degree, contributed to its popularity.

ARTICLE 472.

THE *German-English Dictionary of Medical Terms*, by Frederick Treves, F.R.C.S., and Hugo Lang, B.A. (London: J. & A. Churchill), serves to emphasize the development of German medical terminology, consisting, as it is claimed to do, some 16,000 (!) words not to be found in existing German-English dictionary of any kind. A large number of these, however, are compound words from a common root stock, and we are disposed to think that, in their anxiety to facilitate reference, the authors have carried this rendering of compound words to unnecessary length. They have had to draw the line somewhere, and they appear to have drawn it at *Darmwandeinklemmung*, which, with others of its kind, must be fished out peacemeal. Every credit must be given to the authors for a vast amount of original and well-directed work, which may fairly claim to have made their volume a reliable guide, well up to date. The predominance of German medical science at the present time gives a special value to the work, and it cannot fail to be appreciated. The words dealt with are essentially medical, no terms relating to botany, zoology, physics, pure chemistry, or veterinary medicine being given; but it seems to us that a little more latitude in this direction is desirable, and might be made room for by cutting down the formidable lists of compound designations. The book, as a whole, is a credit to the authors and to the publishers, for if the text is *hors concours*, the "get up" is irreproachable, and, by a judicious selection of type, the maximum of clearness has been obtained, with consequent ease of reference. The volume is neatly and substantially bound—a detail of some importance in a dictionary.

ARTICLE 473.

Experimental Study of Lesions arising from Severe Concussions. By B. A. Watson, M.D. (Blakiston, Son and Co., Philadelphia, 1890.)—The primary object of the experiments performed by the author, and described in this little work, was to produce lesions of the spinal cord, in such a manner that something might, if possible, be added to our knowledge of the condition described by Erichsen under the title of "Concussion of the Spine," and by Herbert Page under the head of "Injuries of the Spine and Spinal Cord." One hundred and forty-one experiments were performed in all. The dogs employed in the experiments were dropped a distance of 25 feet. In 131 cases the fall was so arranged that the blow was delivered on the nates, while the spine formed a nearly perpendicular line from this point. In six other experiments the blow was received along the course of the spine, while the head of the animal was so arranged as to prevent its coming in contact with the floor. Details of each experiment are given, commencing with a description of the normal condition, and then describing the condition of the dog after he had been dropped. Daily observations relating to the general appearance, the temperature, pupils, etc., were made, and continued until the dog was killed. The reports contain, further, a full description of the *post-mortem*, and microscopical appearances. The following are the principal conclusions drawn by the author from these experiments:—(1.) Concussive accidents never produce pathological changes in the spinal cord, except when great force has been applied to the spinal column, and these cases are generally, if not always, complicated with a fracture of the body of a vertebra, dislocation of the same, or rupture or stretching of vertebral ligaments. (2.) The symptoms indicative of these morbid conditions are immediately developed, rarely become intensified by reason of morbid changes in the spinal cord, exceptional cases being limited to fractures and dislocations, or those in which slow hæmorrhage occurs, causing pressure on the cord. (3.) It is frequently very difficult to diagnose stretching of the vertebral ligaments on the living subject, and there are ample reasons for believing that this lesion is frequently overlooked in *post-mortem* examination.

ARTICLE 474.

THE *Journal of Comparative Pathology and Therapeutics.*—The present quarter's issue of this journal contains much interesting matter. During the year 1889, notice was inserted in each number, asking subscribers to send to the editor all tumours excised by them, with a view of collecting information regarding the occurrence of cancer in domesticated animals. In this issue, Dr. McFadyean commences his reports on the tumours which were sent to him during this year. He begins with a description of some epithelial tumours based on three specimens of papilloma ,four of adenoma, and three of carcinoma. The article is illustrated by some excellent woodcuts, shewing the structure of the tumours. Mr. W. Hunting's article, "Suggested Amendments of the Contagious Diseases (Animals) Act," offers some valuable suggestions for more effectually stamping out the diseases provided for by the Act. Three important papers, which have already appeared in other journals, are reported in this number, viz.: "Grease in the Horse," by Professor Müller, of Berlin, "A Contribution to the Study of the Parturient Fever in the Cow," by Professor Thomassen, of Utrecht, and "On the Action—Antidotal and Summative—that the Products of Bacteria exert in the course of Infective Diseases," by Drs. Woodhead and Cartwright Wood."

ARTICLE 475.

THE *Archives of Pediatrics.*—In the April number of the *Archives*, Professor Vargas contributes a paper "On Adherent Vesical Calculus." He relates the history of a case of his own, which occurred in a child between three and four years of age, and furnishes a statistical table of twenty-three cases which he was able to collect from various sources. He concludes that the cases are very rare, but he believes the apparent rarity depends partly on the indifference with which the complication is regarded by surgeons. Litholapaxy is strongly counter-indicated in the treament of adherent calculus. The diagnosis is, therefore, of first importance. Absence of interruption in the stream of urine, and of hæmaturia should suggest the possibility of adherence. If the suspicion is aroused, an antiseptic injection should be made into the bladder, and the stone seized with a small lithotrite. The impossibility of moving it will show that it is adherent. The endoscope will also confirm the diagnosis. Dr. Charles Townsend, of Boston, contributes an interesting article on "An Epidemic of Measles, with Remarks on Rötheln," founded on 76 cases of measles, which occurred during three months, in a dispensary district covering a small area. The epidemic was mild, and many of the cases closely resembled the description given of rötheln. The author concludes that the symptomatology of rötheln is not distinct from measles. The prodromal stage of measles is sometimes short or absent, and glandular swellings and sore throat may be absent in rötheln. It is, therefore, impossible to make the diagnosis of rötheln from a single case. In the same number is a careful report of "Two Cases of Congenital Dislocation of the Shoulder Joint," by Dr. Charles Scudder, and several interesting clinical memoranda on various subjects.

ARTICLE 476.

De L'Antisepsie Par La Resorcine par les Docteurs Le Blond et Baudier (Paris: Bureau du *Journal de Medecine de Paris*, 1889).—The authors commence by saying that resorcin is free from nearly all the objections to which ordinary antiseptics are open. Resorcin is not poisonous even in comparatively large doses, and it may be employed for prolonged periods since it is not cumulative—in fact it is as readily eliminated as it is absorbed. Its solubility in almost all liquids, its volatilisation by heat, and the ready admixture of its vapour with air enable it to reach pathogenic microbes in all parts and without danger to the organism. Resorcin can be obtained in the laboratory in many different ways; but, commercially, it is obtained by a complicated process from benzene. In appearance it resembles sulphate of quinine, but has a faint aromatic odour. It is soluble in water and in nearly all liquids except chloroform and bi-sulphide of carbon. It coagulates albumen and fibrin, and has thus hæmostatic properties, and it prevents fermentation and putrefaction in a remarkable degree.

For diphtheria, the authors have used for the last ten years a ten per cent. solution of resorcin in glycerine. It impregnates the membrane throughout its thickness, and its application is followed within 24 hours by the diminution and, within about two days, by the disappearance of the glandular enlargement. In practice the parts were painted every hour, or at least every two hours, and, usually, chlorate of potash was given internally; in addition, the atmosphere was saturated with a Lister's spray of 50 grammes of resorcin to a litre of water. A large number of cases are given. The authors affirm that the treatment is a specific for all cases of ordinary diphtheria in which the membranes are accessible to the brush, but that, like everything else, it is powerless against the *foudroyant* form, and of only secondary value for laryngeal diphtheria. When the nasal fossæ were affected, a one per cent. cocaine solution was injected.

Tubercular phthisis was treated with resorcin, both internally and by fumigation (from four to eight times daily). The apparatus employed for fumigation was a regulating spirit lamp with a metallic capsule over it. About a gramme of the drug was placed in the capsule, and on lighting the lamp a white, almost colourless smoke resulted. The number of cases treated within five years was eighty, of whom eight died.

Whooping cough was treated in much the same way. The fumigations for the first ten days appeared powerless, for the number of paroxysms steadily increased, but during the next twelve days they rapidly diminished from about twenty to four or five per diem., and when this degree of improvement was obtained the disease seemed to remain stationary. The cure should therefore, be completed with belladonna and chloral together with cocaine spray. The notes of nine cases of whooping cough are given. [The pamphlet appears carefully and honestly written, and, allowing for a little enthusiasm, gives a fair appraisement of this valuable drug. *Rep.*]

ARTICLE 477.

IN the *Journal of Mental Science* for April the treatment of insanity by hypnotism is discussed by Drs. Percy Smith and A. T. Myers, and a number of cases in which this mode of procedure was adopted by the authors are given in detail. The services of a skilled hypnotist were invoked, and the experiments most carefully and patiently conducted, but the results leave but little encouragement to hope that there is much of a field for hypnotism in this class of diseases. Certain of the patients were decidedly hypnotised, but even in this condition they failed to respond to the "suggestions" made with a view to their improvement; and Drs. Smith and Myers quote the non-success of their attempts with the hope that similar experiments may be made in other institutions for the insane. In the same issue of the *Journal* Dr. James Ross, of Manchester, communicates a valuable essay on "The Psychical Disorders of Peripheral Neuritis," and a case of the disease, illustrated by a full-length figure photograph, forms part of the further contents. This case (that of a woman, under the care of Dr. McDowall, in the Northumberland County Asylum) presents many features of interest, and admirably demonstrates the characteristics of alcoholic neuritis; while its recovery under treatment and total withdrawal of the exciting stimulant lends it importance from another point of view. The section of the *Journal* devoted to psychological retrospect includes articles dealing with the progress of alien medicine in France, Australia, Germany, and Russia.

ARTICLE 478.

Verhandlungen der Berliner medicinischen Gesellschaft aus dem Gesellschaftsjahre, 1889. (Transactions of the Berlin Medical Society for the year 1889. Berlin: L. Schumacher, 1890.)—This book consists of reprints from the "Berliner Klinische Wochenschrift, edited by the Berlin Medical Society, and it affords a gratifying proof of the activity of that Society. The number of members is 772, including one honorary and seven life members, and weekly meetings are held from mid-October to mid-June. This volume consists of two parts; in all nearly 500 closely-printed pages, in a paper cover, and with very few illustrations, but no such amount of matter issues from any single Medical Society in this country. The following are the (translated) titles of some of the papers:—E. Küste, Treatment of Suppurations in Cavities with Unyielding Walls; Virchow, Case and Skeleton of Acromegaly; Bramann, Case of Gummata in Muscle; Ewald, Myxœdema; Kossel, Chemical Properties of the Cell-neucleus; Rosenburg, On the Treatment of Cholelithiasis; Moll, Hypnotism; Virchow, Enchondromata of the Spinal Column; Baginsky, Cholera Infantum; Mendel, Reflex Pupil-rigidity; Holz, Ascending Venous Pulse; Arendt, Thure Brandt's Method of Treating Women's Diseases (gymnastic), etc., etc. The discussions on the various papers and cases are, for the most part, reported *verbatim*, and form a considerable attraction, owing to the diversity of view on the part of the writers.

ARTICLE 479.

Archives of Surgery, April, 1890.—With the April number Mr. Jonathan Hutchinson ends the first year of his valuable quarterly journal on general medical subjects. On reviewing the subjects treated during the year we find the author, with his vast fund of information, his keen precision in diagnosis, his ever refreshing creeds, has taken his readers over a great variety of diseases. In the present number we have six coloured illustrations, including two of lupus marginatus, and two of lupus lymphaticus. Amongst the observations on syphilis, attention is drawn to the difficulty of diagnosis of pityriasis versicolor from syphilitic eruptions, the difficulty generally arising in those who have had syphilis. Also the case of a younger child suffering from inherited syphilis, while an elder escapes entirely; another instance of syphilis in both parents, and escape of children from three years later. In observation xxix., there is the case of a girl who, when three years old, had patches of leucoderma on the fronts of the knees, having since spread in round patches over the whole trunk, and to the neck and hands. This case is stated to support the hypothesis that leucoderma belongs to the psoriasis group. If the patches were scaly instead of being merely blanched it would be psoriasis. There is also attention drawn to the value of a long continued course of arsenic, being a cure for recurring herpes of the prepuce. It is with pleasure we note that this unique undertaking has so far exceeded the expectations of the author that it will justify a further increase in the number of illustrations in the second volume.

ARTICLE 480.

THE *Nerves of the Human Body*, by Alfred W. Hughes, M.B. and M.S. (Edinburgh: E. & S. Livingstone), is avowedly an attempt to lighten the task of acquiring a knowledge of this department of anatomy. It comprises 10 full-page coloured plates of the nerves, most artistically executed, and so arranged as to facilitate the remembrance of their origin, course, and distribution. These plates are elucidated and explained by the text, which contains a succinct verbal account of the parts so admirably displayed by the former. It is a work which ought to be in the hands of every student of anatomy, for it tends, not only to an economy of time and labour, but also to the formation of visual images, which are vastly more easy to retain than any descriptions, however clearly put. The publishers are to be congratulated on the production of such an artistic and well-finished volume.

ARTICLE 481.

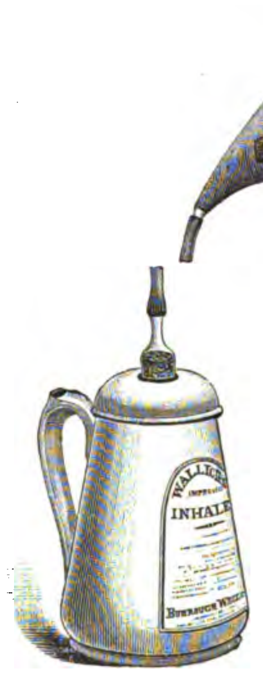
THE distribution of the lymphatics of the female genitals is a subject which possesses a good deal of practical interest, hence the monograph, by Dr. Paul Pirier, who has, for some years past, devoted an enormous amount of time and labour to the subject, merits the attention of gynæcologists and abdominal surgeons generally. He has dissected some 300 subjects at all ages, and injected the lymphatics with mercury; and although he modestly disclaims having exhausted the field of inquiry in this direction, the author may fairly be credited with having thrown a flood of light on a branch of anatomy respecting which little was known for certain, great as is its importance. His discoveries are illustrated by some very excellent woodcuts. The work is published by Lecrosnier and Babé (Paris).

New Preparations.

DIURETIN—"KNOLL."

WE have examined a trial specimen of the new diuretic manufactured by Messrs. Knoll & Co. (Messrs. Burroughs, Wellcome and Co.) Its chemical designation is theobromin-sodio-salicylate, but it is known commercially as "Diuretin Knoll." Theobromine is closely allied to caffein, and, like the latter, it acts directly on the kidneys, but it is claimed not to exert the stimulating influence on the central nervous system, which is one of the attributes of caffein. The diuretic effect may, therefore, be obtained to the full without entailing what may be, and often is, undesirable cerebral excitation. The most convenient form for the exhibition of theobromine has been found by experience to be the soluble sodio-salicylate salt, now introduced into therapeutics under the name of Diuretin. This salt is soluble in less than half its weight of warm water, and the solution does not precipitate on cooling. The usual dose is about 15 grains, or 90 grains in the 24 hours. It appears to be a medicament well worthy of a trial in suitable cases, either as an alternative, or as a substitute, for other drugs of this class.

THE Wallich's Improved Inhaler (Messrs. Burroughs, Wellcome & Co.) is a very sightly and convenient arrangement for facilitating the inhalation of medicated vapours, whether moist or dry, hot or cold. A naso-oral cap is also supplied when it is desired to bring the medicated vapour to bear on the mucous membrane of the naso-pharyngeal tract. The air enters through an aperature in the handle, and is saturated with medicated steam or plain medicinal vapours during its passage through the apparatus, which is easy to clean and cannot well get out of order. The apparatus is a distinct improvement on anything of the kind we have yet seen, and as the price is extremely moderate, it will, doubtless, come into general use.



Miscellany.

PROF. LEYDEN, of Berlin, not long since, showed to his class at the Charité Hospital a case belonging to that category of hysterical women who have a morbid desire to have operations of the most painful character performed without any anæsthetics being used. They do not experience pain; on the contrary, that which produces all the accompaniment of pain in others produces in them pleasure. The patient shown by the Professor to the class was a young lady, who had, during a hysterical paroxysm, fractured her jaw and injured the facial artery. The injury was a serious one; the facial and the carotid arteries had to be ligatured, and part of the lower jaw removed; but the patient insisted in having the operations performed without any anæsthetic, and afterwards informed the operator that she had experienced great pleasure from the operation.

The General Medical Council will meet on Tuesday, May 27th. The chief business of the session will be the discussion of educational questions based on reports of the Examination and Education Committees.

A fire, due to a defective hearth, recently declared itself at Charing Cross Hospital in the Victoria Ward, but was fortunately got under before any serious harm was done beyond a severe scare.

New System of Sewerage in Naples.—The *Revista Internazionale de Hygiene* gives an account of the new system of sewerage in Naples. The total length of the sewers is 76,000 metres, of which about half, or 35,700 metres, is quite new. The fall of the principal sewers does not exceed 5 in 1000.

National Physical Recreation Society.—This Society (the object of which is to promote a healthy physical condition among the working classes of both sexes) is organising a Gymnastic Fête, to be held at the Agricultural Hall for six nights commencing on Whit Monday, the 26th inst. The programme is of a varied and attractive character.

Mineral Water Hospital, Bath.—The report for 1889 shows that during the year 1,113 patients were admitted. The committee specially acknowledge the handsome award received from the London Hospital Saturday Fund Committee in consideration of the large number of patients admitted annually from the metropolis. The financial statement showed a balance in hand of £530.

Epidemic Amongst Horses at Cowbridge. — The epidemic amongst horses, which has been prevalent in the northern part of the county of Glamorgan, has now made its appearance in the neighbourhood of Cowbridge. The disease is locally supposed to be influenza, and several fatal cases have already occurred. It is also stated that swine fever exists in the neighbourhood.

The Australian Rabbit Pest.—The final report has been issued of the Royal Commissioners in New South Wales on the result of the schemes received in response to their proclamation of August, 1887, offering a reward of £25,000 for any method for the effectual exetrmination of rabbits. The schemes were very numerous, and suggested various methods. The Commissioners advise that when necessary the State should advance to lessees of Crown lands and occupiers of land the cost of netting fencing on certain conditions; but they have found no evidence to warrant the belief that any known method can exterminate rabbits.

In a work by M. Luce, recently published, on "France During the Hundred Years' War," we get a curious picture of the well-known hospital, the Hôtel Dieu, of Paris. The history shows the fourteenth century in its struggle against the misery of the poor, and also the private contention, not unfamiliar in our own times, between the surgeons and the nurses of a great hospital. The terrible mortality of the middle ages (in which the average duration of life was seventeen years) may be gauged from the fact that in a single year (1368-69) the Hôtel Dieu buried over 22,000 of its patients. The number of the sick was, it must be admitted, correspondingly great. The accounts of the Prioress of the Hôtel Dieu show that no fewer than 35,000 sheets were daily supplied in the wards. Another Paris hospital, during the same year, in addition to its ordinary patients, gave shelter to nearly 17,000 pilgrims on their way to St. Michael's Mount, and other shrines. According to the author, if the medical services were slight, there was no lack of shelter; a good bed with clean sheets and six (?) warm blankets, the kind service of refined women, and such tisane or theriac as the resources of the time could furnish, were apparently in the reach of all who needed them.

University of London.—A protest against the proposed alteration in the examinations for medical degrees in the London University has been forwarded to the Senate, to which is appended 595 signatures of graduates and undergraduates.

The Liverpool City Council have decided by a majority of 25 to 16 to renew the lease of the abattoirs, although this decision is in distinct opposition to the recommendations of the medical officer of health, supported by nearly the whole medical profession of the city.

A Boston hygienist has created a certain amount of alarm among travellers by the announcement that he has found the air of the tramcars to contain twice as much carbonic acid as the air of the main sewer. Carbonic acid, however, is by no means the most deleterious constituent of sewer gas!

According to the Philadelphia *Times and Register*, a case of Cæsarean section was announced on the list of operations at a certain hospital, but the child would not wait, and elected to come into the world *per vias naturales* before the hour appointed for the operation. The physicians are at a loss to know who is most to blame—the mother or the child.

At a recent meeting of the Paris Municipal Council a proposal for the reinstatement of the Sisters of Mercy in the Municipal Hospitals was carried by 41 out of 61 votes. It is a pity that the authorities cannot make up their minds as to the best course to pursue, for these constant changes cannot but prove prejudicial to the proper nursing of the inmates.

The concluding work of the series Rougon-Maquart, by Emile Zola, the appearance of which gave rise to such commotion in the literary world, is to be entitled "Docteur Pascal." The author is said to have taken for his hero and model the celebrated chemist and physiologist, Claude Bernard, whose domestic life, it appears, was so unhappy that he described himself as one of the "martyrs of marriage."

Leprosy in Russia.—Miss Kate Marsden, one of the five English sisters who went to Bulgaria to attend to the Russian sick and wounded in the campaign of 1878, has been received by the Russian Empress at Gatchina with much gracious amiability, and has been awarded the insignia of the Russian Red Cross. Miss Marsden has also received the Imperial permission to visit all the hospitals in the Empire, and she intends making a tour in order to see such lepers as are to be found in a country where leprosy, although known to be very prevalent by one or two specialists, has hitherto been almost totally ignored by the authorities, and has not yet been properly investigated, or subjected to any organized method of treatment. Therefore, it is suggested, Miss Marsden's more or less accidental creation of an official interest in leprosy in Russia may lead to important results.

Fire at a Lunatic Asylum.—A dreadful fire, resulting in the loss of over forty-six lives, broke out in a lunatic asylum at Longue Pointe, twelve miles east of Montreal, in which 1,300 lunatics were confined. The fire is supposed to be the work of an incendiary lunatic, and is said to have spread throughout the building with lightning rapidity, and the fire appliances at the disposal of those on the premises were totally inadequate. A large number of firemen and police arrived from Montreal, but the supply of water was exhausted in five minutes, and it soon became evident that the building was doomed. Some thrilling scenes were enacted between the firemen and the lunatics whom they were endeavouring to save. All the books and records belonging to the institution are said to have perished in the flames, so that only an approximate estimate of the total damage and loss of life can be given.

The London Medical Recorder.

ARTICLE 398.

THE MONTHLY MIRROR OF MEDICINE.

DR. SANSOM, in the annual oration before the Medical Society of London, took for his subject "The Rapid Heart, a clinical study," in which he confined his remarks to the continuously rapid heart, and not to the "paroxysmal hurry of the heart." Those cases in which this continuously rapid heart is mostly met with in the adult are (1) Grave's disease, and here Dr. Sansom suggests a new name—"Cardio-vaso-motor disease"—a term, however, we do not think will obtain many supporters.

(2). The irritable heart of soldiers. We would here submit that the term may be extended and called "the irritable heart of exciting occupations," for this form of rapid heart is, we think, met with in the politician—and in others who have to perform certain social and other duties. This form of rapid heart is associated (as Dr. Sansom, or rather Dr. da Costa, of Philadelphia, who first described it, mentions) with dyspnœa, dyspepsia, and occasionally pericardial pains. (3). The rapid heart in osteo-arthritis, which has been especially noticed by Dr. Kent Spender, of Bath, who in some instances found the pulse of patients who suffered from osteo-arthritis to beat 110, and even 120 times a minute. (4). The rapid heart without notable morbid associations. This heading embraces a very important series of cases, in which the heart is very rapid, but is unaccompanied by subjective signs of disease.

Dr. Bristowe mentions a case in which the pulse was not only rapid (144 and 148), but also irregular. Yet the patient was unconscious that there was anything unusual about his heart. In such cases no definite cause can be assigned, but some attribute it to over-exertion, others to mental overstrain. Neither is it known exactly whether the myocardium or the nervous system is affected. Dr. Bristow thinks that this form of rapid heart has nothing to do with cardiac disease, while Dr. Samuel West thinks that cases of "paroxysmal hurry of the heart are due to an organic lesion of the muscular substance of the heart."

Of the cases of rapid heart observed by Dr. Sansom himself (75 in number), he classifies them into two groups—first, those cases in which there was abnormal action of the heart for protracted periods in which there was no association whatever with Grave's disease; and, secondly, the cases in which there was an association with Grave's disease.

Of the first class there were 46 cases—30 females and 16 males; of the second group, 29 cases—24 females and 5 males. The circulatory phenomena of the first group are interesting; the maximum pulse rate was from 90 to 110 in seven cases, 110 to 130 in twelve cases, 130 to 160 in thirteen cases, and 160 to 260 in six cases. The cardiac area was increased in three cases only. Heart sounds were mostly normal. Murmurs were only heard in a very few cases. The pulse did not show the signs of low tension, so often seen in febrile disorders. Of the sensory phenomena pain was complained of in 15 cases. In three cases it was very severe simulating angina pectoris. Difficulty of respiration was observed in three cases. Palpitation was observed in seventeen cases—in some cases being very intense, jarring the patients when recumbent, and preventing sleep. The predisposing causes of these various phenomena are described as being, in some cases, mental or physical strain—in some, due to operations, and in other cases the oncome of symptoms was associated with dyspepsia. With the above phenomena was associated a peculiar restlessness and an insomnia. Muscular tremors were observed in eight cases—numbness in one—perspiration in some cases. Hystero epilepsy occurred in one case, in other cases mental troubles were present. Osteo-arthritis was present in six cases.

As regards the second classification, those cases associated with Grave's disease, not much comment is necessary. One case referred to, is perhaps worthy of notice. A lady and her husband were hurrying after a train. The gentleman was in the train and intended helping his wife in. The train, however, was leaving the station too fast, so that the lady was left on the platform—the result being a violent attack of palpitation; and now eight years after this occurrence the pulse is still rapid, varying from 100 to 125. At the time this case was seen, shortly after the above occurrence, the pulse was 160. The thyroid was enlarged, but no exophthalmos.

Dr. Vincent Harris, in his lectures on bronchitis, points out the relative frequency in which bronchitis occurs, and after mentioning Laennec's classification of cases in which bronchial catarrh is found—which, be it remembered, was based upon the different kinds of sputa—suggests as a more useful, if not a more logical, classification the following: firstly, cases in which bronchitis may be considered as a primary affection coming on after exposure to cold, from epidemic influence, or what not. The conditions which are believed to predispose to this affection are also included in this group—such as hereditary tendency, infancy, or old age and feebleness of constitution; in many cases Dr. Harris thinks a micro-organism may be present.

The second class includes all those cases in which bronchitis occurs as a symptomatic affection. The catarrh accompanying many acute diseases is, it may be, another local manifestation of the working of the poison, which produces the more characteristic symptoms of the disease. Of this catarrh may be mentioned that of measles, typhoid fever, gout, and rheumatism.

The third classification, which is considered to be the most comprehensive, comprises all cases in which bronchitis occurs as a consequence of local cause within the chest. Such causes are referable to some abnormality of the blood supply, bronchial or pulmonary, almost always accruing from a valvular lesion of the heart, to some pre-existing derangement of the bronchial air-tubes, or of the surrounding lung tissue. In this class is also included all cases of bronchitis, due to pressure—*e.g.*, of an aneurysm, or of an external growth, and all cases of growth within the lungs, of which tubercle is by far the most common. In reference to the association of bronchitis and phthisis, Dr. Harris thinks that when bronchitis and phthisis occur together that the bronchitis is due to the presence of tubercle within the lung tissue; and he adds that if phthisis is always tubercular, and due to the specific micro-organism, it cannot be caused by bronchitis; but if all wasting disease of the lung be not tubercular, then bronchitis may cause phthisis.

In reference to the question of diagnosis, Dr. Harris gives four points to be observed in diagnosing phthisis and bronchitis:—(1) Localized catarrh of the lung is always suspicious of tubercle, especially if it begins at one apex. (2) A catarrh which persists in one district of the lung for some time, or which slowly spreads from above downwards, is generally a sign of tubercular disease even if impaired resonance be absent. (3) A catarrh beginning with the smaller tubes, and which is localized, is more likely to be a sign of tubercle than one beginning in the larger tubes; hence localized, sibilant, or sub-crepitant râles are more suspicious than sonorous and crepitant râles. (4) A localized catarrh of the smaller tubes of one apex, combined with rapid wasting and night sweats and irritating cough, is suggestive of tubercle. In all cases the sputum should be examined.

Dr. Russell Reynolds, in a contribution to the clinical history of Grave's disease, points out that long before prominence of the eyeball and enlargement of the thyroid occurs, the cardiac and nervous symptoms become developed, and to emphasize this, Dr. Reynolds gives a summary of 49 cases seen by him in private from 1886 to 1890, in which in many cases the circulatory disturbance was the initial symptom, and manifested itself by (1) palpitation, in some cases shaking the thorax, and even the whole body; (2) distressing sensations of "more than beating," such as bursting and faintness; (3) epigastric pain; (4) frequency of pulsation, which ranged from 98 to 100—the most common rate, while the patient was sitting, being from 110 to 118 or 120. On the slightest exertion, the pulse became too rapid to be counted. In the one male case seen, the pulse was 140 to 150 or 160. Murmurs were audible in two-thirds of the cases. Exophthalmos was quite absent in six cases, but present in all the others.

Drs. Risien Russell and James Taylor contribute a paper on the treatment of epilepsy by the biborate of soda. The maximum dose given was 60 grains. While it is not suggested that the biborate of soda should replace the bromides, it is submitted that in those cases where bromides cannot be given it should be tried. Twenty cases are recorded in which epilepsy improved under the use of the biborate of soda. In one case, in which the patient was taking 120 grains in 24 hours, vomiting occurred, accompanied by pain; and in two cases, taking similar doses, diarrhœa occurred. In other cases, eczematous and other rashes have been noticed.

Professor McCall Anderson, in a lecture on ulceration of the stomach, found, out of an analysis of thirty-five cases, that vomiting was absent in two cases, and that hæmatemasis was absent in six cases. He agrees with Ziemssen that ulceration of the stomach is a disease of adolescence and of middle age. In fifteen cases the ulceration was primary and uncomplicated, while in twenty cases there were complications—one patient suffered from abdominal aneurism, one was hemiplegic, two had bronchitis (and one of these had pleurisy in addition), two were scrofulous, seven anæmic, and seven chlorotic.

Dr. Goodhart, in writing on albuminuria, considers that the terms "functional" and "physiological" have little warrant when applied to albuminuria, and that they should be discarded, while the term "intermittent" might be retained; for, he adds, "although intermittency is by no means wholly absent in cases of pronounced nephritis, it may serve to distinguish a group of cases about which it may still be said that some uncertainty exists." Dr. Goodhart points out how the "vagaries" of renal disease are ever puzzling the physician, and he insists upon "the frequency with which serious disease of the kidneys fails in symptoms." He mentions the case of a man, aged 24, who had had syphilis, and who had an enlarged liver and spleen, and whose urine was copiously albuminous, yet the patient seemed in perfect health at the time, and remained so; although the albumen remained for a year or more it ultimately disappeared. He further mentions the case of a young man who, when admitted to hospital in 1886, had extreme dropsy and albumen in the urine, the latter being present when the patient left the hospital. He subsequently enlisted in a cavalry regiment, and says he has been well ever since. When seen quite recently albumen was found in the urine, the heart's apex was beyond the nipple, and the pulse was somewhat hard; but the patient was still following his occupation as a private in a cavalry regiment.

ARTICLE 399.

THE MONTHLY MIRROR OF SURGERY.

A USEFUL and well-compiled paper on "Imperfect Transition of the Testis, with Notes of an Unusual Case," is contributed by Dr. A. Primrose to the May number of the *Canadian Practitioner*. The author first gives a short account of the anatomy and development of the testis, and of the gubernaculum testis, and the factors which are concerned in the production of that condition in which the organ is retained. The latter he summarises as follows:—1. The action of the gubernaculum testis may be deficient. 2. Some obstacle in the original canal, such as a plug of fat. 3. Adhesions to the viscera, or the abdominal wall, consequent on peritonitis. 4. Shortness of the vas deferens, or of the spermatic vessels. 5. Fusion of the two testes—synorchism. The author then proceeds to refer to the abnormal positions outside the abdominal cavity, in which the testis is sometimes found, and quotes Williams' "Analysis of twenty-five cases, where the organ was located in the perineum." He also points out that when the testis is in an abnormal position outside the abdomen, it is liable to become atrophied and useless. It may undergo fatty or fibrous degeneration. This result is not so likely to occur when the gland is retained entirely within the abdominal cavity. One considerable danger existing in cases of testis retained within the abdomen is that any inflammation of the organ readily spreads to the peritoneum and sets up acute peritonitis. The proneness, of course, of a retained testicle, to become the seat of malignant disease, is well known. Out of 25 cases recorded by Williams of testis in perineo, three were complicated with hernia. An inflamed undescended testicle, too, may give rise to symptoms simulating intestinal obstruction. The author appends the notes of an interesting case, of which the following is an extract:—The patient, aged 25, ten years ago, first noticed a lump in the groin about the size of a hen's egg; he thought it was his testicle, and several times tried to force it into the scrotum. About six years ago he accidently discovered a swelling in his scrotum, which was the size of a clenched fist. When he lay on his back it entirely disappeared. He was advised to wear a truss, but this caused him great pain, by pressure on the testicle, and did not prevent the return of the swelling. On admission to the hospital there was a distinct rounded tumour over the inner end of Pouparts ligament of the left side, measuring three inches in diameter. It lay over the anterior face of the external abdominal ring, and extended upwards on the abdomen, outwards towards the iliac spine, and to a slight extent downwards, over Pouparts ligament. There was no redness about the swelling, and its edges were ill-defined. On percussion, a note of absolute dulness was elicited; the tumour was soft and fluctuating; there was no tension. It could be crowded up so as to diminish its size to a considerable extent, and when freed again it would resume its former size and placid condition. It could be made to project downwards into the upper part of the scrotum. The tumour was irreducible, and there was no testicle in the scrotum on the left side. The left side of the scrotum was well developed, and its rugosity proved the presence of the dartos fibres. On invaginating the scrotum, and pressing upwards in the direction of the inquinal canal, the external abdominal ring was felt, it was of unusually large size; its triangular shape was very evident, and its edges sharp and well-defined. At first it seemed as if there was no stricture occupying the ring, but on careful examination a small firm egg-like structure was found between the finger and the pubis. This was supposed to be the vas deferens. Nothing else was felt in the ring. The finger could be passed through the ring to an unlimited extent as far as the limit of the finger would permit. There was no evidence of any internal ring. In front of the external oblique, the tumour was felt, and was bimanually examined. The last tissue in which the tumour lay was explored, the finger could be passed upwards two inches above Pouparts ligament under the superficial fascia, and downwards over the inner end of Pouparts ligament, where a firm crescentic edge of fascia was encountered. Its cavity was inwards, and occupying the position of the falciform edge of the saphenous opening in the fascia lata. An operation was performed under chloroform, and it was found that the tumour in the groin depended upon an omental hernia in its sac protruding through the upper portion of the external ring, and the testicle with the cord and the vaginal process of peritoneum protruding through the lower portion of the ring. An attempt was made to reduce the omental hernia, but this was only partially successful, and was abandoned. The testis was removed, the peritoneum was stitched by interrupted cat-gut sutures over the omental hernia. A cat-gut drain was introduced down to the peritoneum; the edges of the skin incision—two inches and a half in length over the tumour—were brought together, and an antiseptic dressing applied. The wound healed readily. The case is of especial interest because of the anatomical relations of the parts.

Traumatic section of both tendons achillis is certainly a rare accident, and this, together with the fact that a case of this description did well after surgical interference sufficiently warrants our giving the notice of the same in these columns. As recorded in *Gaillard's Medical Journal* for May, by Buchanan, under whom the patient came for treatment, the notes of the case are as follows: The man, while in charge of a mowing machine, stepped in front of the cutting bar and the lathe, and struck the horses; the latter responded immediately; the cutting bar of the machine cut off the tendo achillis, passed directly through the ankle, cutting off both the malleoli, both posterior tibial muscles on the other side [? which], the section was higher up. It passed through the tendo achillis, and cut a piece off the tibia. Both the tendons achillis were united with cat-gut, four sutures being used; the other wounds were also secured with sutures, and the usual antiseptic dressings applied without drainage. The man's wounds healed without any reaction or discharge whatever, and he walks well to-day without support. The union of the tendons was perfect. The author thinks this should be laid on the fact that as long as there is circulation in a limb, an effort should be made to save it. He thinks also that the drainage tubes are more used than is necessary, and that if antiseptic precautions are properly applied with the requisite amount of pressure, there must be no fear of any accumulation of fluid in a wound.

ARTICLE 400.

MEDICAL EDUCATION AT THE GENERAL MEDICAL COUNCIL.

For some years past it has been evident that, with the rising standard of professional education, the four years' curriculum was becoming inadequate, and there have been signs that a prolongation of the minimum time to be passed at a medical school would have to be increased. The vastly greater amount of theoretical knowledge which the student is now called upon to possess, and the development of special branches of medicine of which the student could not be allowed to be entirely ignorant, left but little time at his disposal for that practical work upon which, to such a large extent, his future success must depend. The matter has now been decided by the General Medical Council in a series of recommendations, of which the most important is certainly that which insists upon an additional year, to be devoted exclusively to practical work. Hardly less important, however, are the precautions taken to ensure that the additional year shall not be turned from its original purpose, in virtue of which the student will be required to have passed an examination at the end of his fourth year in medicine and surgery other than practical. This examination does not mean necessarily that he will not be called upon to show any further knowledge in that direction, but it is intended to ensure that he shall have mastered the principles of his profession, and paved the way for the practical work which, as we have said, is to be the feature of this fifth year. As to the place and circumstances in which he will acquire this practical experience, much has been left to his private initiative. He may continue his course at the same school, or he may wander afield in search of pastures new, provided always that he is in a position to prove that the year has been passed in accordance with the requirements of the Council. The only debateable point that arose was as to whether he should be authorized to pass all or any portion of the time as pupil to a general practitioner; and after a good deal of discussion it was decided that he should be allowed to pass six months in that capacity, on condition that the practitioner holds public appointments or is in possession of such other means of imparting practical instruction as may be to the satisfaction of the Council. Opinions were, and are still, greatly divided as to the wisdom of this concession; but in all probability it will turn out to be of little moment, for the only practitioners who can comply with the requirements of the Council are those who would be the least disposed to burden themselves with a pupil except on terms which, on the ground of expense, would be hardly likely to commend themselves to the students, who would find it far more economical, as well as more conducive to success at the final examination, to continue to work at institutions where the clinical material is abundant and accessible, and the facilities for learning correspondingly great.

There was obviously another way of enabling the student to devote more time to acquiring a practical knowledge of his profession, namely, to cut down the exaggerated number of systematic lectures, the utility of which in many instances is certainly open to question. An attempt was accordingly made to grapple with this question, but with only partial success; for the influence of the Scottish professors was too strong, and they succeeded in reducing the recommendation to a mere platonic expression of opinion which it was openly intimated would be disregarded. This failure to cope with a crying evil, which weighs more particularly on students north of the border, is to be regretted; but the lecturers who successfully resisted the proposal to reduce the number of lectures to something like reasonable limits may rest assured that it is only *partie remise*, for public opinion is decidedly against the continued existence of a method of education which, as at present conducted, is both costly and unnecessary.

Preliminary education came in for a share of the attention of the Council, but the modifications were not of any great moment. It is probable that before long the Council will feel compelled to institute a system of inspection of the examinations in arts as they have done for professional examinations, but in the meantime they have caused it to be intimated to the examining bodies that the eye of Europe is upon them. The present moment is a favourable one for raising the standard all round. The numerous lapses in medical education have forced themselves on public attention, and the pressure at the portals of the profession is so great that there is not the slightest fear of the supply of medical men being unduly interfered with. As a matter of fact the measure is not as sweeping as it appears, for the majority of men under existing arrangements fail to qualify within the minimum time permitted by the arrangements. In fact the average time spent by the student in qualifying is probably above rather than below five years. In any case the new order of things will only come into force on January 1st, 1892, and the five years' curriculum will not affect men registered, or entitled to be registered, as medical students at the present time.

ARTICLE 401.

THE THERAPEUTIC VALUE OF SEA VOYAGES.

MODERN improvements in the construction and equipment of sea-going ships have been the means of introducing a therapeutic resource of the most signal value in not a few cases of disease that would prove intractable under any other form of treatment. The great benefit that patients, suffering under certain well defined conditions of illness, derive from a lengthened sojourn in one of the floating palaces or "liners" on the voyage from or to distant countries, is now very generally acknowledged to be real and lasting; and it may safely be said that the possibilities in this direction open to invalids are entirely the outcome of the care and attention with which modern inventions have been bent to the service of mankind. In the old days of sailing vessels, when the voyages now accomplished in a few weeks took as many months for their completion, the cases suitable for submitting to this long continued change were few and far between; while the absence of comforts and luxuries on board were serious objections even in such instances of illness as would have been manifestly benefited otherwise by a journey across the sea. Now, however, the necessities of the most delicate invalid can be met by the refinements of civilisation that exist on board every one of the principal steamships devoted to ocean travelling; and the physician has no hesitation in ordering this method of cure for any or all of his patients whom he considers to be in need of such assistance towards recovery. The use of a sea voyage in consumption is a question which has often exercised the minds of medical men, and the conclusion generally arrived at undoubtedly is to the effect that there are stages of the disease which unquestionably admit of much improvement under the circumstances attending life at sea. The absolutely pure air, the constant soft nature of the atmosphere, the abundant sunshine, and the unusual freedom from clouds, all combine to influence for good the unfortunate victim of phthisis. To this effect abundant testimony is now forthcoming from observers of proved capacity; but it must, at the same time, be admitted that a few instances of injury have to be recorded, mainly owing to the fact that cases unsuitable for the treatment in question have occasionally been subjected to it. Perhaps a due amount of discrimination has not always been exercised in this connection; and patients in a late stage of disease, worn out by exhausting discharges, broken down by long-continued ill-health, incapable of exertion and needing, more than anything else, complete repose, have sometimes been despatched to undergo the sea cure when the most urgent indication should have pointed to rest at home. The favourable experience of Drs. C. J. B. and C. T. Williams in this connection has been fully borne out by that of Dr. Austin Flint in America. And Dr. J. A. Lindsay, of Belfast, in a paper communicated to the *American Journal of the Medical Sciences*, quotes several other authorities who insist on the beneficial result of sea voyages in the class of cases in question. Dr. Lindsay's own conviction is, that the usually received impression, to the effect that hæmorrhagic cases do badly at sea, is not sustained by evidence; he has only known of two instances in which serious bleeding took place under the conditions named, and in neither of these did any bad consequences follow. He justly points out, that treatment of phthisis by residence at high altitudes was formerly held to be unpracticable in hæmorrhagic cases, and concludes that it is just as fallacious to regard this complication as a bar to sea voyaging. On the subject of fever he admits that patients exhibiting high pyrexia should not be submitted to the uncertainties of a long journey and lengthened separation from home; but, given this proviso, fever need not *per se* contra-indicate resort to the sea cure. It may be taken as a good general rule to follow, that any case in which the phthisical changes are far advanced is unlikely to prove a suitable one for such treatment; and probably this admission would now satisfy most of the objections raised against it; though some authorities, like Dr. Burney Yeo, believe that exceedingly few consumptives ever do derive real benefit from the sea voyage. While, however, we have the authority of such observers as Dr. Walshe, Dr. Douglas Powell, Dr. Wilson, and Dr. Herman Weber in support of a contrary opinion, it can hardly be doubted that practitioners will be swayed in the direction of urging resort, in suitable cases, to a method of remedy which seemingly offers the prospect of certain improvement. Nor is it consumptives only whom the rest, calm, and healthful surroundings of a life at sea are calculated to materially help towards recovery. The victims of neurasthenia, of overwork, and brain worry, are peculiarly fit subjects for such a plan of treatment; while sufferers from debilitating diseases, and scrofulous subjects, will find in it a more effectual restorative than any other that is open to them. In a word, the therapeutic value of sea voyages, as possible in the present day, is scarcely to be overrated. C. H. WADE.

ARTICLE 402.

LILLIE ON CURARE AND ITS ALKALOIDS.

ALL observers are agreed that curare paralyzes the motor nerve-endings in the voluntary muscles, but a wide divergence of opinion exists in respect to its action on the sensory nerves and central nervous system. To decide this question, Dr. Joseph Lillie, of Edinburgh, undertook a series of experiments with the pure alkaloid curarin prepared by Professor Boehm (*Archiv f. Exp. Path. u Pharm.*, April, 1890). In frogs, the smallest dose which, injected into the abdominal lymphtsac, caused complete paralysis of all movements, voluntary and reflex, was one of ·00028 mg. per grm. of body-weight, and this he terms the normal dose. In general, death ensues upon injection of more than thirty times this quantity, and in summer even the normal dose may prove fatal from inability of the cutaneous respiration to maintain life. For rabbits, Bechm has fixed ·34 mg. per grm. of body-weight as the minimum lethal dose, about the same for dogs, and for cats a very little more. Under small, not fatal, doses, cautiously repeated, rabbits may be kept several hours in a state of complete muscular paralysis without artificial respiration, as in this stage the movements of the diaphragm proceed spontaneously and vigorously. The following are the results of experiments on frogs in which the hind limbs were ligated (the lumbar nerves being left free) to exclude them from the action of the alkaloid.

1. With small doses (two to five times normal dose) (*a*) the central nervous system remaining intact, there occur, after forty-five to sixty minutes, irregularity, depression, and at length complete abeyance of the reflex function, whether the skin stimulated be the poisoned or the poison-free. If now the cord is cut across, just below the medulla oblongata, a change at once takes place, every irritation, to whatever part applied, evokes prompt and vigorous reflex movements of the ligated limbs. (*b*) If section of the cord be performed a day before the poisoning, no interference with the reflex is in general observed. (*c*) After removal of the cerebral hemispheres, instead of division of the cord, no effect on the reflex is apparent during an hour following administration of the poisons; but on gently irritating the optic lobes with a blunt needle, entire suspension of the reflex, lasting several minutes, occurs immediately, and on each re-application of the stimulus. It is thus evident that the suppression of the reflex produced in frogs, with brain and cord entire, by small doses of curarin, is not due to a direct depressive action upon the sensory nerves, nor to a direct stimulation of the inhibitory function of the optic lobes, but to some influence, probably indirect and reflected, upon the similar restraining faculty possessed by the hemispheres.

2. With large doses (50 to 100 times normal dose) there is speedy abolition of all movements (the reflex, however, remaining, if the cord has been previously divided). After the lapse of seventy to ninety minutes the reflex spontaneously returns. The further progress of the poisoning varies. (1) In the majority of cases, a stage ensues in which the reflex is either simply heightened or accompanied by spasm. Then follows a powerful secondary depression of the reflex, passing, within three to five hours, into complete spinal paralysis; the onset of the latter being earlier the greater the dose and the higher the temperature. (2) In a few cases, the primary depression of the reflex is succeeded by extreme exaltation, leading in an hour or two to general paralysis. In about 5 per cent. of these cases typical reflex-tetanus was observed.

It seems beyond doubt, therefore, that in large doses curarin powerfully stimulates the cord, and it now becomes matter for inquiry, why total paralysis of the cord generally appears in a few hours, and why tetanus is relatively so infrequent. The answer is to be found in the powerful disturbance of the circulation. Small doses cause, after a time, slackening of the heart's action, from change in the blood due to pulmonary breaking. Large doses are followed first by transient acceleration of the pulse, then by retardation; but their most remarkable effect is a progressive lessening of the heart's volume, so that often within thirty minutes the ventricle is virtually empty, though still beating regularly and strongly. In this condition the abdominal veins are found enormously distended, and division of the cord can be effected almost without bleeding. The vessels are manifestly paralyzed, and the cutaneous respiration being greatly diminished, practically no oxygen reaches the organs. Stagnant circulation and gorged vessels together gradually paralyze the central nervous system, overcoming the primary stimulant action of the drug. As further experiments showed, if the curarin is applied directly to the cord, or injected into its vessels, the rest of the vascular system being shut off, tetanus constantly results.

Comparison of methyl-strychnine and curare.

While all the ammonium-bases paralyze the motor nerve-ending, each has, besides, an action peculiar to itself. It is easy also to show that several of the allyl-derivatives of the natural tertiary bases still retain each some marked property of the original substance, the others being masked or abolished by the dominant paralyzing action. But, according to the prevailing view, none of the tetanizing power of strychnine persists in methyl-strychnine. Dr. Lillie's experiments, however, prove this to be an error. To methyl-strychnine belongs, as more or less to all poisons which disable the motor nerve-endings, a paralyzing influence upon the blood vessels; and this, as in the case of curare, prevents the appearance of the tetanus, which, on the other hand, occurs almost at once when the solution is applied directly to the cord, and lasts half to three-quarters of an hour.

Effect of curarin on the blood-pressure.

After detailing his experiments on this point Dr. Lillie thus sums up their results :—"It may safely be concluded that curarin acts in the same way, though much less powerfully, on the extreme periphery of the vascular nerves, as upon that of the motor nerves; and that this action is the sole cause of that lowering of the blood-pressure, which, varying in degree and duration according to the dose, is produced by the drug. In the rabbit, the dose by which the vaso-motor nerves are for a time completely paralyzed, is from

100 to 300 times as great as that which produces universal paralysis of the voluntary muscles."

Dr. Lillie adds a note upon curare, a new alkaloid found by Boehm in 1886. It is a heart-poison, and the effects of curare upon the heart, observed by various authors, were doubtless due to the presence of curarin in the samples employed.

ARTICLE 403.

STADELMANN ON HÆMOGLOBINURIA.

In his previous investigations, Dr. Stadelmann, of Dorpat, produced hæmoglobinuria by injecting directly into the blood vessels either hæmoglobin itself, or some chemical (as polyleudiamine) capable of liberating it from the red corpuscles by solution of their stromata. He now shows (*Archiv. f. Exp. Patho. u. Pharm.*, April, 1890), in a report of some experiments made under his direction by Dr. H. Garodecki, that injections of pure hæmoglobin solutions under the skin or into the new peritoneal sac, are followed by precisely the same results as were yielded by his former methods, and briefly reviews the subject. The noxiousness of transfusion, from an alien animal, of even defibrinated blood, may be held to be demonstrated, and depends, undoubtedly, not upon the alien hæmoglobin, but upon the alien stromata. Bergengrün has, moreover, shown that it is difficult to obtain the former quite free from contamination with the latter, five re-crystallisations being required in the case of dog's blood. This throws light upon the discrepancies of authors in regard to the toleration of hæmoglobin. Thus, Garodecki, using an absolutely pure preparation, was able to add to the blood of a dog $\frac{1}{23}$ of the amount it already contained without producing hæmoglobinuria; while Ponfick observed this phenomenon when $\frac{1}{60}$ was exceeded. The subcutaneous injection of blood is so much less dangerous than its direct introduction into the circulation, because in the former case only a small part of the injurious material is absorbed, at least in an unchanged condition. Solutions of hæmoglobin injected beneath the skin cause great pain, but this is much lessened by using as the solvent a 6 per cent. solution of common salt rendered slightly alkaline.

As to the way in which absorption takes place when hæmoglobin, still united to the red corpuscles, is injected subcutaneously, views widely differ. Some, with Ehrlich and Landois, held that the discs disintegrate forthwith, their skeletons being taken up by the wandering and connective tissue cells, while their pigment, being soluble, is conveyed by the lymph into the blood vessels, but whether as hæmoglobin or hæmatin is doubtful. Others, especially Bareggi and Bizzozero, believe that the corpuscles pass unaltered into the lymph stream, with which they are carried through the thoracic duct into the veins. That this may happen where blood is introduced into peritoneum or pleura is nearly certain; but, injected under the skin, even pure hæmoglobin was ten or twelve hours in showing its characteristic effects on the liver.

By whatever means free hæmoglobin finds access to the circulation, it meets with a various fate in the different organs. (1) It is now generally recognised that a not inconsiderable part is applied to the building up of new red discs. At all events, subcutaneous or intraperitoneal injection of pure hæmoglobin solution, derived from horses' blood, raised decidedly the number of corpuscles and the total quantity of colouring matter in the blood of the recipient animal; though, to be sure, this increase, as Benczur found in man, is only temporary, lasting but a few days. Dr. S. proposes to make a more searching investigation of this point. (2) As Stadelmann's and Garodecki's experiments have demonstrated, the liver seizes on a small portion (say $\frac{1}{50}$ of the amount supplied) and forms bilirubin therefrom. No augmentation is observed in the bile flow, or in the biliary acids, but usually the reverse. When the excess of bilirub in man reaches a certain point, jaundice ensues. (3) Out of the total quantity which the system will tolerate without hæmoglobin or albumen appearing in the urine, a large remainder is still left unaccounted for, and we are obliged to assume that the other organs employ it as nutrient material, like any other albuminoid substance.

After transfusion of alien blood the *débris* of the red corpuscles is taken up and retained by the spleen, liver, and bone-marrow. The alterations in the kidneys coincident with hæmoglobinuria are considered by Stadelmann and others, in opposition to Ponfick, as constituting a true nephritis. He has regularly found in the urine in such cases red corpuscles more or less abundant (which Benczur confirms), albumen after cessation of the hæmoglobinuria and the microscopic appearances of nephritis. He regards jaundice complicating hæmoglobinuria as not the least suspicious and prognostically important symptom, since it indicates a high degree of the abnormal condition.

G. DALE, M.B.

ARTICLE 404.

MOELI ON APHASIA IN THE PERCEPTION OF OBJECTS BY SIGHT.*

THE following is the substance of a paper read at a meeting of the *Gesellschaft der Charité Aertze*, Feb. 20, 1890. Two cases are reported, one of them with autopsy. Case I. A man fell from a tree in 1885, apparently without injury, certainly not to the head. In 1887 speech became impaired temporarily. Has drunk freely the last few years, but has continued work. Was in hospital a short time in December, 1887, with gastro-intestinal symptoms. Admitted again April 6, 1888, complaining of a feeling of stupidity. Thinks and speaks slowly. Complains of weakness and pain here and there in the limbs, but movements are good. Sensibility unaffected. Eye movements and pupil-reaction good. Papillæ somewhat hazy, reddish-grey, the left one slightly prominent; speech normal; knee-jerks normal. In the next few months the psychical condition improved, but the memory was bad. In November, 1888, a sharply defined right hemianopsia was observed. Eye movements slightly slower in all directions. Pupils react well. Owing to peculiarities of the patient in counting the fingers when the hemianopsia was examined, the sense of vision was carefully investigated with the following result:—The patient understands all questions, and can name from memory the proper colours of objects, but finds considerable difficulty in naming well-known objects held up before him. Of a spoon he said, "No; but I use it every day." He could not name a razor, but put his finger along his cheek to indicate its use. The naming of presented colours was most difficult of all. Describes the sensations of touch fairly well. Up to April, reading was fairly good. He wrote fairly well for a time, but tremors soon came on. But gradually these functions failed. Reading became impossible both for print and writing. His own writing, both free and from dictation, became very bad; still he could make a triangle or circle fairly well. The capacity for naming is worse. Calls the picture of a horse a dog, but shakes his head in vexation, and seizes the word horse if pronounced before him. He describes colours of objects correctly from memory. Asked to name a white bird he says "swan"; a yellow one, "canary"; a black one, "raven," and then arranges them according to size correctly. He counts correctly apparently, but often names the number falsely, *e.g.*, if four things were set for him to count, he would touch four fingers, but perhaps utter a wrong number. The right arm showed weakness, also the facial muscles, and the feeling of position was damaged in the right arm and hand. In November there was slight impairment of touch over the right side, and he had great difficulty in expressing himself. If cold were applied, he could not say "cold," but used the word "otherwise." Reading was now impossible, whether aloud or not, but the words could be counted on the fingers. Taste and smell unimpaired. Objects no longer named, but there was never confusion of words. Understands well what is said. Gives the words and continues the tunes of three popular melodies. Dr. Uhtoff repeatedly examined the retinæ, and found paleness of the temporal halves of the papillæ. In December the general and psychical condition rapidly deteriorated, and on January 3 the patient died of pneumonia.

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* On Aphasia, in the Perception of Objects by Sight. *Berliner klin. Wochensch.*, No. 17, 1890.

The *autopsy* revealed a large sarcoma in the left hemisphere, chiefly in the corpus callosum, and extending into the posterior cerebral lobes. Anteriorly the growth reached the medullary matter lying below the posterior central and the lower temporal convolutions. It was about a centimetre distant from the base of the Sylvian fossa. It penetrated the corpus callosum, and distinctly pushed it over towards the right side; it also flattened the thalamus opticus slightly, leaving it free otherwise. A section through the posterior central convolution showed that the tumour here was rather over three centimetres wide, but opposite the anterior central convolution, only a small growth was perceptible, viz., in the gyrus fornicatus. In the first temporal and third frontal convolutions no abnormalities were found.

REMARKS.—Such cases as the above are rare. Freund has collected five cases from literature, and has added some of his own. (*Archiv fur Psych.* XX., H. 1, 2.) Naunyn has said concerning the statistics—"Of these two-fifths of all cases of undetermined aphasia, in more than half the essential lesion was in the neighbourhood of the transition of the gyrus angularis into the posterior cerebral lobes." The present case is unsuited for exact localization, but Freund's cases support Naunyn.

Case II. Female, ætat. 29, treated in 1887 for hallucinations. Improved gradually, and rejoined her family in the end of 1888. In July, 1889, re-admitted much worse. Lay in bed in a stupid condition; frequent spasms of the right limbs and the face. Paresis of right side followed, and a high degree of aphasia with marked right hemianopsia was made out. In October, 1889, words are comprehended with extreme difficulty, the patient's expressions are limited to a few interjections. Repetition of words spoken by others impossible, but mimetic signs willingly followed. Writing and reading are impossible. Her present condition (February, 1890) is one of improvement; the paresis has almost disappeared, sensibility is intact. Retina and pupil-movements normal, but the hemianopsia is unaltered. Vision, as Herr Uhtoff showed, is not much deranged; coloured wools are sorted. Many questions are rightly understood, and the simple objects about the room, when named to her, are rightly pointed out; but she cannot name them herself. A strong inclination is shown to lay hold of any object presented, to bring in the aid of the sense of touch; if the name is supplied she at once assents with an air of satisfaction. If her eyes are closed and a common object is placed in her hands, she never fails to name it at once. In this case, then, after retrogression of perfect aphasia, right sided paresis and cramps, there remain right hemianopsia, alexia, and agraphia. The aphasia still shows itself in slight difficulty of spontaneous speech, with greater difficulty in understanding words, and a remarkable incapacity for naming objects presented to her sight only, especially colours. It may be conceived that each of the centres of perception belonging to the different senses is intimately connected with the motory centre for speech, through an assumed sound-centre. (This assumption seems unnecessary.) The various senses mutually aid in the conception of an object, and this conception generally has a ready tendency to be followed by speech. Then, as regards the optical centre, for instance, if the path between it and the speech-centre be interrupted somewhere near the optical centre, there is the optical aphasia, if the term may be employed, witnessed in the two cases reported. But if there be a lesion in the neighbourhood of the speech-centre beyond the point where the paths from all the centres coalesce, then perfect aphasia is the result (See diagram in orig.) This accounts for the fact that colours were the most difficult of all to name in the above cases, for colours are purely optical phenomena, independent of any other senses. It is remarkable that hemianopsia exists in all such cases.

E. J. EDWARDES, M.D.

ARTICLE 405.

JACOBI ON ANTIPERISTALSIS.

DR. JACOBI, in his paper on colchicine, of which an abstract will be found, has the following remarks on Antiperistalsis:—"Nothnagel and, with him, most authors who have studied intestinal peristalsis are of opinion that antiperistaltic movements of the bowels do not normally take place. I have, now, however, in my experiments, especially on cats, just before the animal was poisoned, observed in the large gut, and sometimes at the lower end of the ileum, when occupied by fæces or gas, the occurrence of antiperistaltic waves with a regularity which forced the impression that the process was an altogether normal one. The phenomenon showed itself in this way. From some spot in the colon where, immediately below a cylinder of fæces, the bowel had contracted to a broadish constriction, there proceeded at intervals of one to five minutes, waves of varying width and depth, which, compressing the soft contents of the gut, travelled in the direction of the ileo-cæcal valve, and, if the lower end of the ileum happened to be full, were continued for some distance upwards. At longer intervals the stool, on relaxation of the constriction at its lower end, would glide downwards a little way, to be immediately checked, however, or even driven back, by a fresh outset of antiperistalsis. When a fæcal mass had attained a proper consistence, it was grasped and, by a downward sweeping, vigorous contraction, impelled into the rectum. The portion of bowel, 10 to 15 c.m. long, thus quickly traversed, would remain, for some time after, firmly contracted, clearly in order to prevent a backward movement of its late contents, and then relaxed as far as the ring of constriction restraining a fresh aggregation of fæces. If, under the action of the colchicine, as doubtless happens, also in other diarrhœas, masses of more fluid consistence and with greater force were driven downwards from the small intestine, their invasion was for a time resisted, with increase of reversed action, by the large bowel, till at last its musculature relaxed a few moments from exhaustion, and the fæces, no longer finding their downward progress opposed, filled the yielding portion of the canal. But in a few minutes the muscular fibres, recovering and energetically contracting, drove the contents of the bowel upwards and downwards, and antiperistalsis began afresh in the manner already described." The lowest portion of the ileum was observed to behave in the same way as the large intestine.

G. Dale, M.B.

Article 406.

BERRY ON THE PATHOLOGY AND OPERATIVE TREATMENT OF GOITRE.*

The author divides innocent forms of goître into two classes—those in which the whole gland is more or less uniformly enlarged, and those in which the enlargement is due to the development of one or more definite cysts, or solid tumours, generally in one lobe only of the gland.

The former is usually met with in young people, and may be regarded as the first stage in the development of nearly all goîtres. The goître consists in some cases of a mere hypertrophy of all parts of the gland, but in most the enlargement is due chiefly to increase in the amount of colloid material in the thyroid vesicles. Each vesicle, instead of containing a small amount of colloid material, as in the normal gland, is much dilated and contains a greatly-increased amount of secretion. In fact it would be correct in most cases to look upon the enlargement as being due to a hypersecretion of colloid material into all the vesicles of the gland. There is also some increase in the connective tissue and glandular elements. That this hypersecretion is brought about, in the great majority of cases, by some material introduced into the body by means of drinking water, admits of but very little doubt. This form of goître rarely produces any very serious symptoms, although sometimes these arise from, by pressure upon the trachea, recurrent laryngeal nerves, and other structures in the neck. Death may result from pressure upon the trachea. As a rule goîtres involving the whole of the gland compress the trachea in such a manner as to cause lateral rather than antero-posterior flattening.

The operative measures for the cure of parenchymatous goître, excluding injections, the use of setons and ligature of the thyroid arteries, which the author regards as worthy of discussion, are the following:—

(1) Division of the isthmus with or without removal of a portion of it.

(2) Resection as recently introduced by Mikulicz, of Cracow, which consists in removing all the goître except a small piece on each side of the trachea.

(3) Extirpation of one half or more of the gland.

Division of the thyroid isthmus was first performed in this country by Mr. Holthouse, at the Westminster Hospital, in 1874; but for some years it attracted little or no attention until revived by Mr. Sydney Jones, of St. Thomas's Hospital, in 1883, since which it has been extensively practised. Mr. Jones pointed out that the operation not only gave relief to the dyspnœa, but caused a remarkable diminution in the size of the goître by inducing atrophy of the lateral lobes. Mr. Berry does not endorse the view that the relief to the dyspnœa is due to the mere mechanical separation of the two halves of the gland, but to the shrinking of the lobes which follows the operation, consequent on the oozing away of the viscid colloid secretion contained in the vesicles of the gland. He has noticed that division of the thyroid isthmus in truly fibrous goître gives little or no relief to dyspnœa, and is not followed by diminution in the size of the growth as in the more common colloid variety. The relief afforded by the division of the isthmus in the colloid variety may be permanent, but frequently the goître reappears when the wound has healed and the secretion is again pent up in the gland. In many cases where very urgent dyspnœa is present a mere division of the isthmus will not afford relief sufficiently quickly. It is then necessary to do some further operation, either tracheotomy or the removal of a considerable portion of the goître, the latter being the more advisable.

Resection, as performed by the Polish surgeon Mikulicz, is particularly suited to parenchymatous goître. He performs the operation in the following manner:—He first isolates one lobe of the goître in the ordinary way, as if he were about to remove it, but takes care to leave untouched the connections on the inner side where it is in contact with the larynx, trachea, and recurrent laryngeal nerve, and where the inferior thyroid artery enters. In this region a good-sized piece of gland—enough to carry on the functions of the organ--is left intact, all the rest of the lobe being cut away. The same proceeding is then executed, if necessary, on the other side of the neck. In this operation the dangerous region above mentioned is not interfered with, consequently there is no fear of injuring the recurrent nerves. The goître is almost completely removed, but the small portions left behind obviate any danger of the supervention of cachexia strumipriva (so-called artificial myxœdema). Twenty-three cases of this operation are reported in Langenbeck's "Archives" for 1888. In twenty the wound healed by first intention; in two, suppuration occurred which delayed the healing process; and one patient died from recurrent hæmorrhage, the ligature having slipped from the superior thyroid artery.

The remaining operation, which may be performed in bilateral parenchymatous goître, viz., removal of one lobe of the gland, is more easily performed than any operation by which large portions of both lobes are removed. It has the disadvantage, however, that the opposite lobe almost always undergoes some degree of subsequent hypertrophy, causing displacement of the larynx and trachea.

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* *Birmingham Medical Review*, June, 1890.

The second class, which may be termed unilateral goîtres, never consist of simply hypertrophied gland tissue. The enlargement is due in all cases to the development in the gland of one or more distinct tumours, either cystic or adenomatous growths of some kind. They less often cause death by suffocation than do bilateral parenchymatous goîtres. Still they are frequently a source of considerable inconvenience, and even of some danger, to the patient. Hence at times they call for removal, and this may be performed with very little danger. There are two methods of operating, enucleation and extirpation. The former consists of removal of the tumour alone from the interior of the gland, everything else being left behind, and is applicable only to those cases in which the goître forms a well-defined tumour embedded in the gland. The latter consists in removing the whole of the affected lobe of the gland. The author gave details of cases in which he had operated for unilateral goître by enucleation, and also one case of extirpation, the tumour weighing eighteen ounces, the results in each being satisfactory. The discussion of other methods of treating cystic goître by tapping, injecting, etc., was outside the scope of the paper. GEORGE BROWN.

ARTICLE 407.

LADAME ON "GERLIER'S DISEASE."

THERE are three varieties of this disease (paralysing vertigo), viz.: (1) Where patient appears to be blind drunk. (2) Where he is in a state of contemplation. (3) Where he appears to be standing asleep. The disease was observed to spread like an epidemic into the neighbouring villages, and to disappear with the onset of the cold weather.

The three pathonomonic signs are (1) muscular resolution; (2) cervical pain; (3) ocular disturbances, which occur in a more or less intense, frequent and regular mode, sometimes daily like ague attacks, lasting for periods of ten minutes, the patient enjoying perfect health during the interval. Muscular resolution may affect any portion of the voluntary motor system, but chiefly the extensors and left side of the body. It is bilateral though not usually symmetrical; as in the case of a shepherd, one hand was capable of performing the act of milking, whilst the other remained helpless, which gave the idea of it being simply Basedow's milker's cramp; but on second thoughts the author believed he had to deal with a muscular paralysis. In addition he noticed in some patients a kind of paralytic stammering. Cervical pain:—It seems that this symptom, although laid down by Gerlier as pathonomonic may be exchanged for a pain in the loins, so that a spurious lumbago follows a spurious torticullis: these painful spots, however, became the centres for other pains to radiate and flash out, thus resembling the lightening pains of posterior myelitis, but differing from them in being less severe and lasting longer.

Ocular disturbances:—Ptosis is the only objective symptom met with, the troubles being subjective in character, as cloudiness of sight at the beginning of an attack, double vision sparks, oscillation, dancing of objects before the eyes. Gerlier also remarks that having to deal with a "psychic impression, whose source is in the sight," the eye has an undoubted influence in producing an attack, especially when it is disturbed by the bustle of human beings in towns, and the glare of strong light.

Although the information is very meagre, it seems to occur chiefly among farm servants; and in the epidemic at the farm of Château de Collex in 1884, nine cases of illness out of 24 took place. In 1885 there were two fresh cases at Collex; in 1886 an epidemic took place at Genthod, a short distance from Collex; out of seven men who worked there six were attacked. The chief symptoms were, and which always took place during the work, in the great heat of the afternoon: troubled vision, with heaviness of the head, and a feeling of weakness, which spread from the nape of the neck to the neck, the arms, and the legs. No pain was complained of; these appeared in succession, and with increased severity, as soon as the patient stooped, and ceased as soon as he rose up again; the most marked symptom being the half closed lids, the labourers presenting a remarkable appearance in trying to open them.

MORGAN DOCKRELL, M.A., M.D.

ARTICLE 408.

NUCLEAR PARALYSIS OF THE OCULAR MUSCLES*.

THIS is one of the most complete contributions to the subject of ophthalmoplegia which has appeared, and if taken in and read in conjunction with Mauthner's paper in the *Vortrage aus. d. ges. Aug enheil.* (1885-9) and Mr. Hutchinson's paper in the *Med. Chirurg. Trans.*, lxi. and lxii., may be said practically to cover the whole ground.

The writer points out first that some confusion exists as to the terms employed. In speaking of ophthalmoplegia, Hutchinson used the adjectives external and internal to signify that the amplification of the extrinsic (or orbital), and the intrinsic (or intraocular) muscles respectively. But some confusion might arise by connecting these terms with the internal or external recti; and, as a matter of fact, it is our experience that those who have not studied the literature of the subject, and on hearing of ophthalmoplegia external or internal for the first time, do frequently understand the words in this sense. Dufour therefore adopts Mauthner's suggestion that the terms ophthalmoplegia exterior or interior should be substituted.

Some confusion also exists as to what degree of paralysis is to be classed as ophthalmoplegia. Practically Mauthner's definition is generally accepted—the condition in which on one side muscles are paralysed, which are supplied by different nerves, or in which muscles on both sides are affected, but some confusion is introduced when the terms complete or incomplete are added, as there is then a doubt whether the adjective refers to the number of muscles affected or to the degree of paralysis. The following definitions are therefore suggested, and it is to be hoped that they will be adopted:—

Isolated paralysis of one or more muscles supplied by a single cranial nerve.

Complete ophthalmoplegia exterior (uni-lateral or bi-lateral) of all the six extrinsic muscles on one or both sides, the intrinsic muscles being intact. If the adjunct incomplete is substituted, it indicates that some muscles have escaped, but the terms complete or incomplete have no reference to the degree of paralysis.

Ophthalmoplegia interior, when monocular, is always complete; if only one set of fibres were affected the case should be classed as isolated paralysis. If binocular, it may be complete on one side and partial on the other. If both intrinsic and extrinsic muscles are affected it is mixed ophthalmoplegia, and this may be uni-lateral or bi-lateral, complete or incomplete.

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* *Annals D'Oculist, March-April,* 1890, pp. 97-182.

As regards the seat of the lesion, it may be causing a given paralysis; it may be orbital or intracranial. The diagnostic features of the former are fully given, but as they are well known we omit them. The intracranial lesions may be subdivided into those which are (*a*) cerebral and (*b*) basal. As the ocular movements are under the influence of certain cortical areas, it is evident that a lesion causing ophthalmoplegia may theoretically exist either in the cortex itself (cortical); the fibres connecting the cortex with the nuclei or origin of the nerve motor, nerves (cortico-fibrillaire); in the nuclei (nuclear); in the fibres between the nuclei and the point where the nerve emerges from the brain.

Although the experiments of Horseley have placed it beyond doubt that the ocular movements are influenced by certain cortical areas, our knowledge on this point is too doubtful at present to render any definite statements advisable. The author suggests that hysterical affections of the orbital muscles may be due to cortical lesions. The situation of the "cortico-fibrillaires" lesions is of course equally doubtful. Fascicular paralysis can hardly affect the eyes alone. But when an ophthalmoplegia is accompanied by nemiplegia the author states that the lesion may be localised in the upper part of the peduncles, when some of the fibres of the motor-oculi escape, and in the lower part when they are all implicated. As regards the diagnosis of a basal legion it is often extremely difficult, the implication of the olfactory nerve, and the fact that several cranial nerves on one side only are affected, while the eye is blind, is strongly suggestive of a basal lesion. On the other hand, if extrinsic muscles supplied by the third are affected, while intrinsic muscles escape, the lesion can hardly be basal.

As long ago as 1856 von Graefe accurately described cases of ophthalmoplegia, but at that time the nuclear origin of the nerves had not been discovered, and the symptoms were attributed to a basal lesion until an autopsy proved their non-existence.

The researches, however, of Hensen and Völkers enabled Förster, in 1878, to explain ophthalmoplegia exterior by lesion of the nucleus of the nerves. Hutchinson, in the following year, attributed ophthalmoplegia interior to disease of the lenticular ganglion, and Parland, in 1880, was the first to show that both forms of ophthalmoplegia were of nuclear origin.

Accurate diagnosis of nuclear lesions of the ocular muscles was impossible until Hensen and Völkers had pointed out that the motor-oculi arose from many nuclei situated in the floor of the aqueduct of Sylvius, in fact that this was not a single nerve but a group of nerves. The relative position of these nuclei, as laid down by them, has been confirmed by other observers. (It is fully described in this paper, but we omit it for want of space.)

As regards the course and termination of nuclear paralysis the writer subdivides the cases into chronic and acute paralysis. Chronic paralysis. (*a*) Stationary. One or several nerves become affected, most often symmetrically on the two eyes, twelve examples are given. The symptoms may remain for an indefinite time. Very rarely some slight improvement occurs even after several years. (*b*) Progressive. These cases show great varieties. In some the lesion remains confined to the extrinsic muscles of the eyes; affecting them successively in a varying order (eleven examples). Other cases commence as labio-glossal paralysis, the muscles of the eyes being subsequently affected; or the order may be reversed. Other cases, again, are complicated with general muscular atrophy. Examples of all these conditions are given.

The acute cases are subdivided into the malignant (grave) and benign. In the first class the symptoms come on rapidly, and end with a fatal result. The twenty-seven examples quoted are among the most important, because there was an autopsy in most of them. In thirty-seven autopsies the following lesions were found:—A: Destruction or compression of motor nuclei of the eyes by (*a*) tumour, nine cases; (*b*) hæmorrhage, eight cases; (*c*) softening from thrombosis, one case. B: Affection of the nuclei themselves by (*a*) acute hæmorrhagic inflammation, seven cases; (*b*) inflammatory degeneration, acute, or chronic, three cases; (*c*) atrophic degeneration of the cells, six cases. C: Negative result, six.

Case 84. Man, aged 28. Symptoms dated from an explosion, in which he received no direct injury. They commenced with somnolence, with apathy and muscular weakness; then incomplete bilateral ophthalmoplegia exterior. He died five months later. The autopsy showed diffuse encephalitis, reaching anteriorly to the anterior commissure, the posterior part of the chiasma and the point of exit of the third nerves posteriorly to the floor of the fourth ventricle, the aqueduct of Sylvius being dilated. The other cases are given with the same detail, but we are compelled to omit them. In some the motor centres of the eyes were attacked; secondarily, these have been classed by Wernicke as "poly-encephalitis superior" in opposition to poly-encephalitis inferior, in which the nuclei were primarily affected. In other cases, both fascicular and nuclear lesions were found.

In the benign cases, after the symptoms have attained their height, a certain amount of improvement takes place; in some, even complete recovery.

The localization of the lesion cannot be made from the ocular affection alone, but only from a consideration of all the symptoms. In other words, ophthalmoplegia exterior is not synonymous with nuclear paralysis.

As regards cause, the disease is much more frequent in the male (122 to 41), and most common in adults. Fourteen cases were associated with labio-glosso-pharyngeal paralysis, twenty-one with locomotor ataxy, four with Basedow's disease. The connection with syphilis does not seem so constant, as was assumed by Hutchinson. According to our author, out of 220 cases, only 23 showed evidence of syphylis (excluding the ataxic cases). Other assigned causes: magraine, disordered menstruation, exposure to cold. Thirteen cases are attributed to alcoholism, three to tobacco, five to lead, eleven to diphtheria, three to scarlet fever, and a few to other general causes. Thirteen were attributed to direct injury.

Altogether particulars, more or less full, are given of 220 cases; and a very full list of the literature of the subject is given. W. ADAMS FROST.

ARTICLE 409.

SUCKLING ON AGAROPHOBIA AND ALLIED MORBID FEARS.*

THIS paper discusses agarophobia and allied conditions, which may be regarded as manifestations of mental disorder. Agarophobia is derived from 'σγο'ῤη, a market place, and φὸβος, fear. It should be carefully borne in mind that this affection is a symptom, and not a disease. In the majority of instances there is a history of insanity.

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* *International Journal of Medical Sciences*, May, 1890.

The rarity of the case on which this paper is founded is shown by the scantiness of the literature of agarophobia. Gowers and Ranney follow the chief text-books in making no mention of the subject. Dr. Roberts has a short article in *Quain's Dictionary of Medicine*. Rosenthal, in his *Diseases of the Nervous System*, mentions it as a symptom of chronic cerebral congestion, also as associated with overwork and prolonged gastric disturbance. Grainger Stewart briefly dwells on the condition in his lecture on "Giddiness." Westphal, in 1872, carefully described the disorder, which was ably treated by Legrand du Saulle in 1878. A surgeon gives his own case in the *Lancet* for Jan. 10, 1885, where agarophobia followed religious mania, brought on by overwork. Two other cases occur in the same journal, Jan. 17 and April 25, 1885.

The *British Medical Journal*, vol. I, 1879, has an abstract of a paper by Dr. Meschedi, of Cassel, describing an affection the reverse of, but closely allied to, agarophobia. It is the dread of being in closed spaces, and is called claustrophobia. In both cases the patient is unable to form an accurate conception of the dimensions of his surroundings. In the *American Journal of Insanity*, Dr. Andrea Verga describes his own case of acrophobia, or fear of high places. A translated paper, by Dr. Kovalensky, of Kracov, in the *Journal of Mental Science*, vol. xxxiii., has an account of "Folie du doute." It discusses fully the relations of these pathophobias, which are described as springing from the soil of neurasthenia.

These morbid fears are too numerous to name: mysophobia is the dread of infection, and astrophobia the fear of lightning. Agarophobia, however, and claustrophobia deserve special names. A patient suffering from the former is incapacitated from any out-door employment, and, in an advanced stage, is unable to leave the house.

The author mentions a young woman (previous inmate of an asylum) brought to the Queen's Hospital, Birmingham, by her mother, who stated that the girl had an intense dread of getting into a tram-car, fearing she would die in it, and being seized with severe trembling and palpitation on merely seeing a car. Although aware of the absurdity of these fears, patients cannot be reasoned out of them. The girl spoken of walked five miles to the hospital, rather than travel in the tram with her mother. A family history of neurosis is generally obtainable. The neurasthenic condition has been traced to overwork, worry, excessive lactation, or other debilitating cause. Later on, morbid fears supervene, and at length actual insanity may demand an asylum. Child-bearing is a potent cause of agarophobia. In one case the wife of a medical man suffered for several months after her first confinement.

These pathophobias are really manifestations of partial emotional insanity, and sometimes end in pronounced insanity. The essential condition of agarophobia is a morbid dread of an open space. Indoors the patient is quite well, but if he tries to cross the street or to go into a field he is seized with an intense feeling of fright, and has to run to a wall, or falls down, quite unable to proceed. Palpitation occurs, with a feeling of constriction over the heart; the legs give way, and the limbs tremble. There is no vertigo, as a rule, and no confusion of mind or loss of consciousness. Attacks may come on suddenly or gradually: the patient is conscious of his condition, and recovers on reaching his own house. In severe cases, he becomes practically a prisoner; it may be for months, or even for a lifetime. The symptom is neurotic, and not hysterical. Treatment consists in removing the cause, where feasible, and in the administration of nervine tonics, such as valerianate of zinc, the hypophosphites, iron, quinine and phosphorus, together with a liberal diet and moderation in stimulants, tobacco, and coffee. Moral measures are of value. Case as follows:—

M. H., a married woman of 40, in comfortable circumstances, was admitted to hospital complaining of inability to walk in open spaces, and also of depression of spirits. Is neurotic; never suffered in same way before; no family history of nervous disease; has had nine children and one miscarriage. One child she suckled for twelve, and another for twenty months. Nine years back, when in a weak state of health, she was seized one day with a horrible dread and shivering while going upstairs. A few months later, while out of doors, she had a fit of fear and palpitation. Has been subject to similar attacks ever since. Cannot walk in an open space. On leaving house for a few yards has to turn and run back again. Can run better than she can walk, but cannot run in a straight line. If she carries a weight, such as two buckets of water, cannot walk straight. Walks well in a passage, and finds the lines of a bare wooden floor assist her greatly. Is able to cross a ploughed field, but not a meadow. In hospital she accounted for not being able to walk straight by the large size and strangeness of the ward. In the grounds outside she got along fairly well, but on leaving the wall for a yard or two she became unsteady, and had one of her attacks. She could not walk straight out of the ward door, but hugged the wall. A stick was a great help, but did not enable her to overcome her fear. Patient was nervous, and subject to fits of depression, also to numbness in the hands and arms, the latter coming on in the night; appearance anæmic and depressed; thyroid gland slightly enlarged, but soft; sensation and muscular sense normal; eyes healthy; special senses normal, except black spots and flashes of light before vision, and slight deafness of nerve origin; plantar, abdominal, and epigastric reflexes present; knee-jerk exaggerated; no ankle clonus; no motor symptoms, nor loss of co-ordination; memory for recent events somewhat impaired, intellect otherwise unaffected; heart slightly enlarged, with soft systolic murmur at apex, not conducted into axilla. After ten days in hospital patient insisted on leaving. During her stay she showed none of the ordinary symptoms of hysteria. Later accounts show improvement, and patient has been to church. Has continued iron and bromide prescribed in hospital.

The author concludes that agarophobia is a symptom and not a disease, its subjects being neurotic, and often showing previous nervous disturbance; it may be acute or chronic; it is the most important of the morbid fears, as it completely incapacitates its victims; that any exhausting disease, habit, or occupation may be the exciting cause in people with a predisposition; that treatment consists in removing faulty habits or depressing influences, in prescribing generous diet, cheerful society and surroundings, change of air and nervine tonics, such as iron, strychnine, and arsenic with the bromides, the latter being given with care and in small doses. Finally, that all cases of neurasthenia should be carefully and systematically treated, as thereby much suffering and insanity may be prevented. DAVID WALSH.

N 2

Anatomy and Physiology.

RECENT PAPERS.

403. Eremeieff, Dr. Ivan V.—A Contribution to our Knowledge of the Influence of Cold Wet Frictions on the Assimilation of Fats from Foods in the Healthy and Sick with Atony of Bowels. (*St. Petersburg Inaugural Dissertation*, No. 29, 1890, pp. 30 and xiv.)

404. Poehl, Professor Alexander V.—On Chemical Properties of Spermin. (*Vratch*, Nos. 6 and 16, 1890, pp. 148, 375.)

405. Pototzky, Dr. M. F.—A Contribution to the Chapter on the Injection of Brown-Séquard's Emulsion in Old People. (*Rüsskaia Meditzina*, No. 16, 1890, p. 246.)

406. Boymand, M.—On a New Test for Albumen in Urine. (*Répertoire de Pharmacie.*)

407. Cunningham, Mr. D. T.—On the Production of the Cerebral Convolutions. (*Nature*, June 5, 1890.)

Art. 403. *Eremeieff on the Influence of Cold Wet Frictions on the Assimilation of Fats.*—Dr. Ivan V. Eremeieff, of St. Petersburg, describes his experiments in Professor V. A. Manassein's clinic, which he has made with the aim to elucidate the effects produced by cold wet frictions in regard to the assimilation of fatty ingredients of food. In all, eight observations on as many men, aged from 19 to 32, were carried out, five of them referring to healthy subjects (including the author himself), three to patients suffering from intestinal atony with constipation, etc. Each observation lasted ten days, and was divided into two five-day periods, during one of which the person experimented upon was subjected to energetical general frictions by means of a bed sheet soaked in water, at from 11° to 13° R., the procedure being repeated twice daily (at 11 or 12 a.m., and 5 or 6 p.m.), and lasting each time from seven to ten minutes. The dietary consisted of raw milk, best butter, bread, lean meat, tea, sugar, and water, the total amount of fats ingested in the course of a five-day period in individual cases varying from 243·7 to 624·0 grammes. The following are the principal deductions drawn from the researches: 1. In patients suffering from atony of the intestinal muscular coat, the frictions decidedly increase the assimilation of fats, the surplus oscillating between 0·6 and 2 per cent. (*e.g.*, in a patient who had been previously assimilating 95 per cent. of the fats ingested, the percentage rose up to 97 under the influence of the frictions). 2. In healthy persons, however, no marked or constant influence is observed, though sometimes the assimilation may also improve. 3. In all, appetite and the sensation of well-being are distinctly improved. 4. The beneficial action of the rubbings on the assimilation may be explained—(*a*) By the procedure inducing a more lively circulation in all abdominal viscera, especially in the liver and pancreas, and *eo ipso* increasing and improving the secretion of digestive fluids, including the bile and pancreatic juice which play so important a part in emulsifying fats and their absorption; and (*b*) by the frictions stimulating, in a reflex way, Meissner-Auerbach's intestinal plexus, and hence increasing peristalsis of bowels, the result being that food masses come in a more extensive and more intimate contact with the absorptive surface, and, correspondingly, are absorbed more perfectly. 5. The effects, naturally, are largely dependent upon individual peculiarities of the patient—upon the state of his general strength and nutrition, his nervous system, etc.

404. *Poehl on Chemical Properties of Spermin.*—As is known, Messrs. Parke, Davis and Co., of Detroit, have recently introduced spermin (in the shape of a hydrochlorate) as the active principle of Brown-Séquard's testicular emulsion, and at the same time, as a substitute for the latter. In view of the fact, as well as in view of Dr. Varlot's communication (*Therapeutic Gazette*, 1889, p. 566), Professor Alexander V. Poehl, of St. Petersburg, has undertaken a research with regard to chemical properties of the substance. The most characteristic reactions of spermin are said to be these:—1. Phospho-tungstic acid, on being added to a solution of spermin, gives a thick precipitate which arises but slowly, and is insoluble in acids. 2. Iodide of bismuth produces a white precipitate, which is soluble in hydrochloric acid. 3. By itself spermin does not possess the characteristic seminal odour; the latter appears, however, when the substance is mixed with metallic magnesium. On heating the mixture, the seminal odour yields place to that of ammonia. 4. Neither iodide of potassium nor acetate of lead gives rise to precipitation in solution of spermin. 5. Hypobromite of sodium does not set free nitrogen from spermin. 6. Fehling's solution is not reduced by the substance. 7. Gold chloride and platinic chloride give precipitates with spermin. 8. On heating, dry spermin evolves white vapours. According to Professor Poehl, spermin does not belong either to ptomaines, or leucomaines, but represents an imide (an ethylene imide, C_2H_4NH, as Drs. Ladenburg and Abel have found. *Vide* the *Berichte der Deutschen Chemischen Gesellschaft*, 1888, p. 758).

405. *Pototzky on the Injection of Testicular Emulsion in Old People.*—Dr. M. F. Pototzky, house surgeon to Professor V. J. Kuzmin's clinic, in Moscow, details five highly interesting cases in which he tried hypodermic injections of Brown-Séquard's testicular fluid. In each case eight injections (alternately into the peri-trochanteric region and the arms) were made in the course of twenty days. One of the patients, aged 57, who had had an apoplectic attack six months previously, was suffering from right-sided hemiplegia, with aphasia, apathy, and obstinate constipation. Under the influence of the treatment paralysis markedly decreased, aphasia and constipation disappeared, the patient became cheerful, his pulse fuller, its frequency fell from eighty to seventy per minute, while the daily quantity of urine increased from 1,300 to 2,000 cub. cc. A second case referred to a man of 70, with marked arterio-sclerosis, agonising neurasthenic pains about all the four limbs, obstinate constipation, anorexia, insomnia, very weak pulse, and extreme general weakness (could not either walk or stand). The treatment was followed by the disappearance of pains and constipation, and a striking improvement of the man's general strength, his appetite and sleep returning to a normal condition, the pulse becoming stronger and fuller, and the daily quantity of urine increasing 500 cub. cc. A third case is that of a man, aged 65, with cancer of the larynx, accompanied by dropsy, scanty urine, irregular, quick and weak pulse, and profound cachexia. After a second injection the daily amount of urine rose from 506 to 1,100, after a fifth to 2,600 cub. cc., to fall, subsequently, permanently to 1,500. After the eighth injection ascites disappeared, œdema of the legs considerably subsided, sleep, appetite and general state markedly improved and the pulse became

regular and much fuller, its frequency decreasing from 120 to 70 per minute. A fourth patient, aged 60, was suffering from incontinence of urine and fæces, anorexia, weak pulse, extreme general prostration, apathy, incipient senile dementia. The injections brought about a marked amelioration of the man's subjective state, but failed to make any impression on any of the physical symptoms. The fifth and last patient, aged 55, had advanced and rapidly progressing tabes of six years' standing. Under the treatment his gait became fairly steady and assured, the patient being enabled not only to stand, but even to walk, with his eyes shut; while co-ordination of such long standing strikingly improved, cutaneous anæsthesia and paræsthesias decreased, appetite returned, retention of urine was diminished from 500 to 40 cub. cc., the daily amount of urine voided rising from 900 to 1,700 cub. cc. The improvement, however, proved to be durable only in two of the eight cases (in the second and fifth), in which no relapse followed up to the date of the communication (five weeks after the last injection). In the remaining patients all the beneficial effects vanished about the fourth or fifth day after discontinuing the injections. Dr. Pototzky arrives at the following general conclusions. (1) The emulsion undoubtedly produces a stimulating action on the heart and circulation. (2) It also possesses a diuretic property. (3) It removes constipation in virtue of its relaxing influence on the bowels. (4) It markedly improves the patient's general state. (5) Its stimulating and tonic action on the nervous system, however, surpasses all other effects. (6) It is highly probable that in young and middle-aged persons all the effects will prove still more pronounced than in old. (7) On the whole, the method fully deserves a further extensive trial. (8) The injections do not give rise to any unpleasant accessory general or local phenomena beyond some slight and short-lasting pain at the site of the puncture. (9) In technical regards, however, the method is rather troublesome. [Professor Stepan D. Kostuerin, of Kharkov (*Vratch.*, Nos. 5 and 10, 1890, pp. 105 and 234), has been the first to introduce Brown-Séquard's method into practice in Russia. He described eight cases (referring to seven men, aged from 23 to 63, and one woman of 65) of neurasthenia, senile prostration, tabes, &c., treated by the injections, the total number of which in individual cases varied between two and sixteen. The most striking results were obtained in a merchant of 56, suffering from severe tabes of twenty years' standing. After two injections (the nature of which remained perfectly unknown to the patient), his gait became steady and sure; he was enabled to stand and even make some steps with his eyes closed; tremor and anæsthesia of the hands markedly decreased; his handwriting improved most strikingly (as some illustrations adduced by the author beautifully show); pains and paræsthesias disappeared, &c. No relapse yet occurred (three months passed since the last injection). In neurasthenic cases the treatment led to a considerable amelioration of the patients' subjective state (they became cheerful and capable of working), as well as appetite, sleep, sexual power, action of the bowels, &c. In none were any disagreeable concomitant effects noticed. Professor Kostuerin lays down the proposition that the injections are fully justified, and should be resorted to in all cases of failure of the general systemic nutrition, prostration, senile marasmus, and certain nervous diseases, such as tabes, etc. At a recent meeting of the St. Petersburg Medical Society, Dr. Fedor S. Roshtchinin (*Vratch*, No. 14, 1890, p. 331) has communicated fifteen cases of senile marasmus, diabetes mellitus, neurasthenia, sexual impotence, &c., more or less successfully treated by him with the injections (a syringeful into this or that limb twice a week). In a diabetic gentleman of 58, with apathy and drowsiness, after four injections the symptoms disappeared, while the proportion of sugar in his urine fell from 52·9 to 2·3 pro mille. Similarly beneficial effects were observed in another case of diabetes, referring to the author himself. The following are the main corollaries drawn by Dr. Roshtchinin from his clinical experiments. (1) The emulsion affords a powerful stimulant means which strengthens the cardiac action, improves the general systemic nutrition, increases the brain action, and restores the regularity of all functions of the organism. (2) The injections cause some local pain, which may last from a few to forty-eight hours. (3) They do not give rise, however, to local inflammation or suppuration.

VALERIUS IDELSON, M.D.

406.—*Boymand on a New Test for Albumen in Urine.*—M. Boymand states that the best re-agent for the detection of albumen in the urine is trichloracetic acid. It is said to be more reliable than nitric or metaphosphoric acid—and it also has the power of precipitating that peculiar form of albumen which is thrown down by heat but re-dissolved on the addition of acetic acid. Trichloracetic acid is obtained by the action of chlorine gas upon acetic acid. The test may be used in a solid form or in solution. If the solid be employed, a small fragment is placed in a test-tube containing the urine; it sinks to the bottom and is dissolved, producing a cloudiness, or, with very clear liquids, a zone of cloud. The solution can be used either saturated or fairly concentrated. When poured upon the urine to be examined, it forms a ring which is characteristic—like that obtained by means of nitric acid, but without producing any colouration. If the urine contains much urate of soda, it is better to dilute it with distilled water.

FRANCIS HAWKINS.

407. *Cunningham on the Production of the Cerebral Convolutions.*—The author comments on the remarkable papers recently published by Dr. G. Jelgersma, of Meerenberg, who endeavours to explain the influence which leads to the production of the convolutions on the surface of the cerebrum and cerebellum. Many theories have been advanced to account for these. Their presence has been ascribed to mechanical forces operating upon the brain from without, whilst some have sought to explain them by the supposition of different degrees of growth-tension acting upon the brain-surface; but in every case these theories, when submitted to the test, have broken down, in so far that it is impossible, by means of any of them, to show how it comes about that small animals have smooth brains, and large animals convoluted brains; how, in short, we should find in the beaver—an animal remarkable for its intelligence—a cerebrum almost entirely smooth, and in the sheep—an animal, shall we say remarkable for its dulness?—a brain with a high convolutionary system. Jelgersma not only explains this, but makes the apparent discrepancy the strongest pedestal of support to his theory. Briefly put, his views are as follows:—The grey cortex of the cerebrum, which in different forms of the same animal group, preserves a tolerably constant thickness, and increases by surface extension. If we extend the surface of a smooth-brained animal say four times, we must pro-

vide eight times as much white matter to fill the interior of the grey capsule, if we desire to keep the surface even; or, to put it in different terms, if we lengthen out the radius of the brain say ten times, we acquire a surface extension one hundred times greater, and an internal capacity one thousand times greater. The geometrical law involved is simply this, that in the growth of a body the surface increases with *the second*, but the interior with *the third* power of the radius. Such being the case, it is very evident, seeing that the proportion of internal white matter and external grey matter is in all cases a uniform one, that in the evolution of a large animal out of a small animal, a disproportion between the grey capsule and the white core of the cerebrum must result. This is compensated for by the extended cortex placing itself in folds or puckers, and thereby reducing the capacity of the capsule to a degree which brings it into correspondence with the white contents. Consequently, "the formation of the convolutions and furrows is simply the result of the tendency on the part of the superficial layer to increase by surface extension, and of a mutual space-accommodation of the grey substance and of the white conducting paths." The author states that the theory advanced has received independent testimony in its favour at the hands of his colleague, Prof. George E. Fitzgerald. In February last, before he had read Jelgersma's first article, and before the appearance of the second, he explained to Prof. Fitzgerald, as far as he could, the conditions of cerebral development, and asked him if he could offer any geometrical explanation which would account for the appearance of the convolutions. The views which he then advanced were identical with those of Jelgersma, and further, they were expressed in very similar terms. This, of course, adds greatly to the weight of the hypothesis. But Prof. Fitzgerald went further than Jelgersma, because the latter states that he is enabled to explain why the fissures and convolutions should, within certain limits, assume the same formation in different animals. Fitzgerald, however, saw the importance of his theory in regard to the localization of function in different areas of the cerebral cortex. The surface extension of the cerebrum cannot be a uniform one: the bulgings out in the shape of the convolutions must necessarily be connected with the functions which the areas involved have to perform. Therefore if a given area of grey matter increases it must pucker out, unless an undue quantity of white matter grows all over the inside of the grey cortex.

ALFRED S. GUBB.

Surgery.

RECENT PAPERS.

409. **Pratt, Reginald, and C. J. Bond, F.R.C.S.**—On Dilated Urachus Treated by Incision and Drainage. (*Lancet*, April, 1890.)

410. **Delbet, M.**—On the Lesions consequent upon forced Flexion of the Phalanges. (*Bull. de la Soc. Anat.* de Paris, 1890, p. 117.)

411. **Heidenhain, Dr.**—On the Causes of Local Recurrence after Removal of the Breast for Cancer. (*Arch. F. Klin. Chir.* vol. 39, p. 96.)

412. **Davis, Dr. W. E. B.**—On the Treatment of Local and General Peritonitis. (*The Times and Register*, Philadelphia, May 17th, 1890.)

413. **Browning, Dr. A. G.**—On the Treatment of Keloid. (*New York Medical Record*, May 10th, 1890.)

ART. 409. *Dilated Urachus Treated by Incision and Drainage.*—A gentleman, aged 54, was seen on June 8, 1890, having suffered since the previous November. When examined the abdomen was found too much distended below, the dulness on percussion extending to three inches above the umbilicus, with perfect dulness of the flanks, and sensation of fluctuation. On June 15 the tumour was aspirated, and a small quantity of thick, gummy semi-translucent fluid was drawn off containing very little albumen, but much mucus. On July 9, a large incision was made midway between the umbilicus and pubes, evacuating more than a gallon of a ropy, gummy, semi-solid laminated substance, partly squeezed out and partly drawn out in stringy layers. The cyst cavity extended upwards to and beneath the liver, and downwards into the pelvis. A drainage tube was inserted and large quantities of the mucoid material were aspirated and squeezed out through the tube. In December, 1889, he left for America in good health, the cyst still being capable of holding half a pint of fluid which had not ceased being secreted in July, 1890, when last heard from. The case was diagnosed as one of an immensely dilated persistent urachus.

RICHARD NEALE, M.D.

410. *Delbet on the Lesions consequent upon forced Flexion of the Phalanges.*—As a result of his experiments, the author finds that three kinds of lesions are possible as a sequence to forced flexion:—(1) Tearing off of the point of attachment of the extensor tendon, the joint being opened at the same time. (2) Fracture of the phalanx, without opening of the joint. (3) Tearing off of the tendon, with opening of the joint. The number of experiments made was 44, lesions occurring in 32. Of these, 14 were tearings off of the point of insertion; 14 fractures of the phalanx; and 4 tearings of the tendon. Of the cases in which the lesion was observed clinically, 9 in number, 7 occurred in males and 2 in females. The youngest subject was 17 years, the oldest 50. The mechanism of the fracture is in all cases the same: the muscles take no part in it; the tendons, however, firmly fixed at the level of the joint capsule and on the dorsal surface of the second phalanx, cannot be displaced beyond their short physiological limits of movement. If they are forced beyond this, fixed as they are, they play the part of ligaments, and tear off the bone if they do not yield themselves. It remains now to be explained how it is that the mechanism, being always the same, the lesions are not always similar. The author believes that the explanation is to be found in the diverse shapes of the bases of the phalanges in different individuals. There are, first, those which have an extremely curved articular surface, and in which, therefore, the union of the dorsal surface with the superior part of the articular surface forms a kind of beak (*phalangette à bec*). It is in phalanges such as this that tearing away of the point of insertion takes place. Again, in other cases, the articular surface is less curved; the tendon, then, instead of being inserted at the edge of the articular surface, being attached 1 or 2 mm. lower down. In these, also, the phalanx is slightly narrowed beyond the articular surface, so as to have a kind of neck (*phalangette à col*). Fracture is the result of the requisite violence in these phalanges. Finally, there

are conically-shaped phalanges, in which the size gradually diminishes from the base downwards (*phalangette conique*). In these there are no special points of weakness, and a rupture of the tendon is the lesion in their case. The author notes that in the four lesions of this kind which he produced experimentally, three were of the long extensor of the thumb; and that the ungual phalanx of the thumb is that which most frequently presents this conical shape. Of the cases observed clinically, six were of the little finger; the index, ring, and thumb, once each. The medius is the most difficult to injure experimentally, and the author knows of no case in which it has been affected in the living subject. When the affection is not treated, the phalanx remains flexed and interferes with the use of the hand; when treated, however, the result is generally a cure.

Bertram C. A. Windle, M.A., M.D.

411. *Heidenhain on the Causes of Local Recurrence after Removal of the Breast for Cancer.*—The author has examined with the microscope the surface of 18 tumours, after removal, which has been as free as possible. The result of this investigation was that he made a prognosis of recurrence in nine cases: of these, one patient was lost sight of; six patients suffered from a recurrence; another died of development of cancer elsewhere, before any recurrence. In three other cases the recurrence was declared to be probable, some nodules of cancer having been found near the surface of the amputation: the recurrence followed in two patients; in the third, the patient was still free from the disease a year after the operation. The author draws attention to the following points:—1st. The thinness and (especially in stout women) the badly-defined limits of the pectoral fascia, and the impossibility of removing it without including with it a layer of the pectoral muscle. 2nd. The breast in attenuated persons is entirely, and in fat subjects partly, in contact with the pectoral aponeurosis and the subjacent muscle, so that it is easy to leave some portions of the gland behind during the operation. 3rd. Every breast in which there exists some nodules of cancer, is probably diseased in its entirety; the epithelial cells can be conveyed to a distance by the lymphatics of the gland—probably some cases of recurrence begin from some acini which have been left in the wound. 4th. In the retro-mammary fatty tissue the lymphatics and blood vessels are usually to be found, by means of which infiltration of the tissues with cancer cells is readily brought about. 5th. Usually the pectoralis major is not involved by the disease. If the cancerous mass is freely movable upon the muscle, it becomes infected by the extension of cancerous nodules in the fascia, or directly from the primary growth. 6th. The epithelial cells are probably carried into the lymphatics of the muscle by the movements of the muscle itself. The author is of opinion that, in mobile cancers of the breast, it is essential to remove the whole surface of the pectoral muscle, so as to secure the complete removal of the fascia, and divide the vessels as deeply as possible in the muscle. If the cancer is not mobile, all the pectoral muscle should be removed as well as the subjacent cellular tissue. Küster has demonstrated that total removal of the pectoral muscle is by no means difficult, and that recovery is not interfered with, saving perhaps that the movements of the arm are less free. It goes also without saying that, in all these cases, the lymphatic glands and tissue surrounding them should be fully taken away.

H. Percy Dunn.

412. *Davis on the Treatment of Local and General Peritonitis.*—The author regards the following principles as pretty well settled. (1) Simple peritonitis, when caused by a sufficient quantity of a chemical irritant, will produce death by the extent of the inflammation. (2) Simple inflammation may end in septic peritonitis by producing a weakened condition of the walls of the intestines, which permit the passage of septic germs from the intestinal canal into the peritoneal cavity. (3) While pathological germs in a small quantity may be absorbed by the healthy peritoneum, without producing a peritonitis, the same quantity combined with a chemical irritant may produce a violent inflammation — the irritant having prevented the absorption of the germs, and caused the exudation of a nutrient fluid for their multiplication. (4) Large quantities of septic fluids and microbes always produce suppurative peritonitis; yet a small quantity of either may be absorbed and destroyed, unless the peritoneum has been weakened by antecedent pathological changes. (5) A septic fluid may gravitate into dependent parts of the peritoneum, and become shut up, either by plastic inflammation, or by a coil of intestine, and thus be prevented from producing diffuse peritonitis; but, after a time, this may rupture and produce death from general peritonitis. (6) The germs of septic peritonitis will be found in the kidneys and other organs of the body, and in greater quantities, according to the extent and duration of the inflammation. (7) The condition of the peritoneum, and the nature and quality of the septic product will determine the rapidity of the inflammation, which usually ends in from forty-eight hours to six days; but death may be produced from shock within a few hours. Tubercular inflammation is slow. From a consideration of the foregoing, the following lines of treatment are deduced. (1) Promote absorption of the inflammatory products of simple peritonitis as rapidly as possible, and thus relieve the inflammation, and prevent septic peritonitis. (2) In the early stage of either form, where the cause cannot be determined, hasten the absorption of inflammatory products, &c., with purgatives. (3) When medical treatment fails to give relief, septic fluids should be removed by operative procedure. (4) In localised peritonitis with circumscribed pus—the latter should be removed and the cavity drained. (5) In acute septic peritonitis, operation must be adopted early to be of use, as the inflammation will certainly extend and absorption of septic germs into the system will cause toxæmia, even though the local condition be relieved by a late operation. The author further points out that peritonitis is not a "distinct disease.". That the "opium splint" is irrational, for it merely locks up the products of inflammation. He gives opium and morphia in perforation. The two first indications of treatment are met by free purgation, magnesium sulphate preferably, or calomel. In perityphlitis he advocates early laparotomy, and agrees with Wylie, that should improvement not show itself after four or five days of salines, an opening should be made. In frequently repeated attacks of appendicitis he recommends complete removal. In acute septic peritonitis, as met with after child-birth, from perforation, or from bursting of an abscess, nothing but laparotomy can save life. In wounds, the abdomen should be opened at once and thoroughly explored without waiting for symptoms. Perforation from typhoid fever is a fatal accident, and operation should not be condemned without having been tried in a larger number of cases. He opens abdomen in middle line and removes cause, if

feasible. Cavity is thoroughly douched with warm water; all adhesions broken up, and drainage tubes introduced. In cases of excessive tympanites he does not advocate puncture with fine needles, but considers the best way is to fill the gut with hot water, making an opening for that purpose into the ileum, if necessary.

David Walsh.

413. *Browning on the Treatment of Keloid.*—In the treatment of small keloid growths, Dr. Browning has obtained satisfactory results from the application of a solution of perchloride of mercury in collodion, in the proportion of one of perchloride to thirty of collodion. The tumour is thickly coated with this application, which is allowed to remain until it peels off, usually five or six days. Another coating is then applied, and so on, until by successive coatings the growth is reduced to a level with the surrounding surface, when the cure may be regarded as complete. From three to six applications only are necessary, according to the size of the growth. By using a solution of the above strength, little or no irritation is produced; the crust drops off at the end of five or six days, bringing with it a layer of coagulated tissue, leaving a smooth, dry surface being for the next coating. A stronger preparation (one to twenty) may be used, but this latter sometimes gives rise to local irritation and sharp smarting pain at the second and subsequent applications.

Medicine.

RECENT CASES.

417. Carter, Dr. Alfred H.—On Pyrosis or Waterbrash. (*Practitioner*, May, 1890, p. 321.)

418. Herbert, H.—On an Unusual Cause of Pneumonia. (*Lancet*, May, 1890, p. 1067.)

419. Rake, Dr. Beaven.—On the Significance of Visceral Tuberculosis in Leprosy. (*Brit. Journ. of Derm.*, Feb. 1890.)

420. Moore, Sir William, K.C.I.E.—On the Nature of Leprosy. (*Prov. Med. Journ.*, May, 1890.)

421. Brakenridge.—On Influenza (*Edin. Med. Jour.*, May, 1890).

422. Czerny, Dr.—On a Case of Primary Carcinoma of the Kidney in a child, aged 3½ years. (*Arch. fur. Kinderheilk*, xi., 1889, p. 247.)

423.' Deckens, Dr. A. Hamilton.—On a case of Aneurism of the Abdominal Aorta. (*Med. and Surg. Reporter*, Philadelphia, May 3, 1890.)

424. Granville, Dr. Mortimer.—On the Diet of the Gouty. (*Med. Press and Circular*, May 28, 1890.)

425. Bourneville.—On the Idiocy of the Myxœdematous. (*Archives de Neurologie*, No. 56, March 8.)

426. Schmitz, Dr. R. Neuenahr.—Can Diabetes be Transferred? (*Berliner klin. Wochensch.*, No. 20, 1890).

427. Mayer Jacques. — On the Causation of Diabetes. (*Ibid.*)

428. Preston, Dr. George J.—On the Nature of Hysterical Paralysis. (*New York Med. Rec.*, May 17, 1890.)

Art. 417. *Carter on Pyrosis or Waterbrash.*—Dr. Carter endeavours in this paper to obtain a clearer notion of what is meant by pyrosis, and gives this definition: "A paroxysmal condition, rarely occurring before puberty, generally beginning with pain in the epigastrium of variable severity, increased by movement, especially in the erect posture, but often relieved temporarily by complete rest and relaxation of the abdominal wall. This is followed after an uncertain interval by the discharge of fluid from the mouth, by an act which is quite distinct from free vomiting. There is no nausea and no effort." The fluid ejected is thin and watery, clear or nearly so, mawkish taste and alkaline in reaction, varying in amount from a spoonful to a pint or more. Ferric perchloride causes it to become darkened. Pyrosis may be neurosal in its origin, or due to food or gastric disease often of a serious nature. Dr. Carter does not agree with those authorities who trace the fluid to the secreting apparatus of the stomach; on the contrary, he believes it always due to paroxysmal secretion of the saliva and due to a nervous reflex, the stomach being often dilated, and regards pyrosis as a neurotic affection of reflex origin, characterised by paroxysmal salivation, and due to peripheral irritation generally proceeding from the stomach, but not unfrequently from other parts, especially the pelvic generative organs of females. As regards treatment opiates are valuable judiciously administered, but saline aperients and enemata are needed to clear the system generally. Carlsbad salts every second and third morning, with *Sodii Phosphatis* ʒj; *Sodii bicarb.*, g.x. in bitter infusion an hour before each meal, often answer admirably. In severe cases washing out the stomach is often necessary. For diet milk diluted with half its bulk of hot water is best, and the addition to each pint of the following powder, *Sodii bicarb.*, ℈i, *Sodii chlor.* ℈j, *Magnes levis gr.*, is desirable for a time.

418. *Herbert on an Unusual Cause of Pneumonia.*—In this case, a male ascaris lumbricoides was found lying with its tail in the main bronchus, and its head extended into the posterior part of the left lung, deeply buried among the finer tubes. The whole of the lower lobe of the lung and a small adjoining strip of the upper lobe were in a state of ordinary grey hepatisation. The worm was alive and measured 4¾ inches. Three other large female worms were found in the stomach and duodenum.

Richard Neale, M.D.

419. *Rake on the Significance of Visceral Tuberculosis in Leprosy.*—Dr. Beaven Rake states that the frequency of visceral tuberculosis, according to his statistics, is about thirty per cent. In regard to the question as to whether the visceral lesions are due to the bacilli of leprosy or to those of ordinary tuberculosis, the author quotes the opinion of Danielssen, who believes in infection by the bacillus of Hansen. He also cites Arning as being of the same opinion. Dr. Rake states that it is very difficult to distinguish by means of the microscope the one bacillus from the other, notwithstanding the fact stated by Danielssen that the lepra bacillus varies in size in different parts of the world. The cultivations of Bordoni-Affreduzzi, who states that he has succeeded in obtaining the bacillus of Hansen on ordinary mediums, furnish no argument, they having been made twenty-four hours after death. The author's own attempts at cultivation were negative. There are two principal forms of tuberculosis observable in leprosy:—1. The generalized and miliary infections of the viscera and serous

membranes. 2. The large yellow tubercles, having a caseous and ulcerative tendency, which are chiefly observed in the lungs. The author is of opinion that in the tubercular or mixed form of leprosy the visceral infection may coincide with the absorption of the cutaneous tubercles. He believes that in the anæsthetic variety the rapid phthisis which is so often observed is not well explained by auto-infection, the bacilli being limited to the nerves. He admits that the probabilities are in favour of the leprous nature of these cases of visceral tuberculosis in leprosy.

G. Thin, M.D.

420. *Moore on the Nature of Leprosy.*—The various theories which have been advanced from time to time to account for the production of leprosy, are discussed by Sir William Moore, K.C.I.E., whose experience among sufferers from the disease has been very considerable. Concerning the malarial theory, Sir William Moore is convinced that it does not afford any sufficient explanation of the ætiology of the affection, and especially since leprosy is a prevailing malady in countries which are free from the so-called malariæ. In the same manner it is assumed that insanitary surroundings and absence of salt in food are not of themselves efficient factors in the production of leprosy, inasmuch as it is shown to occur freely among the denizens of carefully drained and cleansed quarters, though it is admittedly much more common among the poor and destitute; and also because it is constantly encountered among the inhabitants of semi-desert districts in Western India, the principal product of which is salt. The much-debated influence of a fish dietary in causing leprosy is discussed at some length, and it is shown that from various circumstances fish in any form is almost an unknown food in districts whose populations exhibit as large a proportionate number of lepers as is found among those living on the coast. To this effect also is the evidence afforded at a meeting of the Medical and Physical Society of Bombay, held last winter, and at which the subject of fish eating in relation to leprosy was brought under discussion. The speakers were generally agreed that no sort of connection existed between the two, and this view seems now to be pretty universally accepted by those who possess opportunities of observing if such a relation has any existence in fact. The theory to which Sir William Moore inclines, and the enunciation of which is the real object of his paper, is that leprosy is a phase of inherited syphilis, and he offers replies to the principal objections raised against the acceptance of that view which regards the two diseases as of similar nature. The many remarkable characteristics shared in common by leprosy, tubercle, and syphilis, have for long past excited the attention of scientific surgeons, and the well-known labours of Mr. Jonathan Hutchinson on the connection between the first of these diseases need only be referred to in proof. Respecting the possibility of leprous subjects contracting syphilis, which has been urged as a reason against the identity of the two affections, Sir William Moore says that he has never seen such a case; but he adds that even a Hunterian chancre may very exceptionally be twice developed on the same person; syphilis arising in a leper would be comparable to it. Though it can hardly be said that the author advances anything that is absolutely new in his paper, yet he lends fresh emphasis to several points which will well bear careful reconsideration, and especially just now that special attention is being devoted to the discovery of the actual *materies morbi* of various ill-comprehended diseases. Leprosy as a wide-spread contagious disease, the victims of which are debarred from ever anticipating a cure of their condition, must command and will receive unceasing study so long as it proves the *opprobrium medicorum* that it is at present.

Chas. H. Wade.

421. *Brakenridge on Influenza.*—This paper was read before the Edinburgh Medico-Chirurgical Society, and embodies the results of an experience of 236 cases, all of which occurred in private practice since *mirabile dictu* not only was there no case of the disease in the Edinburgh Royal Infirmary, but even the special hospital, prepared by the town in readiness for the epidemic, has been without an inmate. Upon these facts the writer bases his contention that the well-to-do classes have been the great sufferers. In the cases given, the sexes were about equally divided, and the ages varied from three to 75. The symptoms were those commonly observed, and the following were exceptional and noteworthy:—In three cases the first symptom was a sudden faint; in one case, that of a lady aged 25, there was severe gastric hæmorrhage at the beginning of the attack; in two patients, there was paralysis of the bladder; in one, a boy, right herpes zoster; in one, slight wrist drop; in one, aphasia and word blindness. In many women the affection began about the menstrual period. A relapse was very common on the fourth day; but although a slight cause sufficed to produce one, no true relapse occurred where the patient was guarded against exposure to cold and indiscretions in diet. The essential symptoms were entirely confined to those which could be referred to the nervous system; even the throat, when affected, was hyperæsthetic rather than inflamed, and the eruptions, when present, were of the class of neuroses. Dr. Brackenridge concludes that the disease is due to a micro-organism; that it is but slightly, if at all, contagious; and that the evidence as to whether the epidemic was true influenza or dengue is pretty evenly balanced. "If," he says, "dengue be simply a tropical modification of influenza, may not the tendency of the present epidemic to assume something of the dengue type be due to the mildness of the season?" [To this query we would make the objection, that while even our summers here are not very tropical in character, our winter months, even at the mildest, are the very reverse of tropical, and surely the December climate of St. Petersburg is not very mild.] The treatment consisted, in bed until at least the fourth day was over, prolonged use of light and digestible food, gentle saline aperients where necessary, antipyrin in 5 to 10-grain doses for the pain and fever, and strict avoidance of alcohol. During convalescence, tonics.

Ralph W. Leftwich, M.D.

422. *Czerny on a Case of Primary Carcinoma of the Kidney.*—Three weeks before the admission of the child to hospital a remarkable hardness was observed in the abdomen. On examination a tumour was found in the left half of the abdomen, reaching from the costal arch to the symphisis, scarcely transgressing the middle line and not interfering with the respiration. Intestine lay between the abdominal wall and the tumour. The urine contained nothing abnormal, but urination was difficult. Pain in the site of the tumour first appeared in the latter part of life. On extirpation of the tumour it was proved to be a carcinoma of the left kidney, only a small part of the normal tissue of which remained at the upper part of the tumour. The child died soon after the operation from shock.

Bertram C. A. Windle, M.A., M.D.

423. *Deckens on a Case of Aneurism of the Abdominal Aorta.*—This case is mainly interesting because of its doubtful diagnosis, even to the last. It is, briefly:—E. C., widow, age 38, has had one child. Has been a strong healthy woman all her life, with a good family history. Three months before coming to hospital was taken with a sudden pain just below the right shoulder-blade. A few weeks afterwards a small swelling appeared at that spot. Her health began to fail, and she applied at a dispensary complaining of pains and aching in the stomach and back. She was treated for uterine trouble, but, her condition not improving, she was admitted as an in-patient to St. Mary's Hospital, Philadelphia. On examination a large pulsating swelling was found in the back, on the right of the spine and midway between the axilla and the crest of the ilium Palpation did not reveal expansile pulsation, but rather a to-and-fro feeling like that of the heart-beat. There was no *bruit*, although a faint sound could be heard at rare intervals. Pressure did not give pain. On the contrary, a firm binder proved a great source of comfort. Sharp shooting pains were felt. Five months after first symptoms, patient came under Dr. Decken's treatment. The swelling had increased much in size, and had the appearance of a tumour, in the common acceptation of the term. Pains were intense, of a steady gnawing character, mostly referred to the umbilical region, and radiating down the right hypochondrium. Morphia was prescribed hypodermically, and increased to nearly six grains daily. Rest, light diet, tonics and a binder, with alcohol bathings, constituted the treatment. Iodide of potassium could not be tolerated. *Ante-mortem* diagnosis was full of doubt, and included aneurism of uncertain location, internal tumour and abscess of debatable origin. Up to within a week of death the advisability of tapping was suggested. Some suggested origin in the lung, or in the liver, from the hepatic artery; others inclined to the thoracic aorta or the abdominal aorta just below the diaphragm. Eight months after commencement of illness, patient died. *Post-mortem* examination revealed a sacculated aneurism of the abdominal aorta, commencing directly above the cœliac axis, and including an inch and a quarter in length of the aorta. It expanded into a sac which filled the greater part of the right side of the abdominal cavity, and crowded the right lung into half its usual bulk. It extended two inches to the left of the spine, and below to a level with the crests of the ilia. The adhesions were so extensive and so strong that it was impossible to detach the sac from the surrounding structures. Its circumference was approximately between 30 and 35 inches. It was firmly adherent to the abdominal walls, peritoneum, liver, intestines, etc. Its interior was nearly filled with organized fibrin, great masses of which could be taken out with the hands. Several of the ribs had entirely disappeared posteriorly, and some of the vertebræ were partly eroded with sharp projecting spiculæ of bone. Towards the last the patient complained of a swelling feeling in the throat, and painful pulsation in the neck on the right side. She also became extremely melancholic.

000. *Granville on the Diet of the Gouty.*—The writer advocates an entire reconsideration of the method of dieting commonly prescribed for the gouty. As regards sugar, he contends that it must be taken largely, whether allowed or not, since starch forms 70 per cent. of ordinary bread and the bulk of nearly all vegetable foods. Meanwhile the experiments of Bocker, Bischoff and Voit show that sugar has not the least effect in reducing uric acid. Dr. Granville recommends a free use of sugar in the gouty diathesis —believing it to be a natural stimulant to the kidney cells. As to meat, it is denied to gouty patients, in face of the fact that those animals which feed exclusively on flesh produce very little uric acid, while those which live exclusively on vegetables produce little else than uric or hippuric acid. Current practice assumes without any certain premises that there is over-production of uric acid through excess of nitrogenous food. If this mere hypothesis happen to be false, we may be depriving the sick and weakly organism of its necessary supplies in the clumsy attempt to prevent excessive production, whereas the fault is perhaps non-elimination. Again, that stimulants are not injurious in virtue of their containing alcohol is proved by the immunity from gout enjoyed by many spirit-drinking people. Imperfectly fermented wines are injurious because of the fermentation set up in the stomach. Port wine is not merely innocuous but beneficial in gout, if it has been kept long enough in wood to insure completeness in the process of fermentation. If the urine of a healthy feeder be tested, it will be found that when he takes more vegetable and less animal food he will excrete more uric acid; while more meat than vegetables produces more urea. Dr. Herschell afforded the opportunity of examining the urine of a savage, who ate five and a half pounds of meat daily, but who excreted a minute trace only of uric acid, and seventeen grains per ounce of urea. Dr. Haig shows that storms of uric acid follow an indulgence in animal food. This the author believes to be the elimination of previous accumulations. A like outpouring of uric acid is caused by indulgence in port wine or champagne, agents which are scarcely nitrogenous and cannot, therefore, themselves augment the quantity of uric acid formed. Urine does not sample the blood; if more acid, then the blood is more alkaline. Dr. Granville adopts a diet resembling the diabetic. Little bread, sugar not debarred in moderation, spirits absolutely forbidden, dry champagne, claret, well-matured port, and sometimes Pilsener beer allowed. This system is recommended on the strength of many years' experience. Not all old and accepted theories are true, and not all new ones are false.

David Walsh.

425. *Bourneville on the Idiocy of the Myxœdematous.*—The author has written an extensive paper on the above subject, and winds it up with the following reflections which contain the pith of the whole matter, and are a general commentary on a case which he had under his care in last February:—(1) The very incomplete facts which we possess, about the family and personal antecedents of the malady, do not throw any light upon its cause. We can alone recall the existence of tuberculosis in the father, a brother, and a sister. (2) In this case, the same as in others such the first symptoms of the pachydermatous cachexia and the congenital absence of the thyroid gland were observed to be at about three years of age. It was thought on enquiry that it was possible, that the appearance of the pachydermatous cachexia was retarded by the milk food, and that it manifested itself in proportion as the infant was submitted to ordinary food. A precise knowledge of the physiological action of the thyroid gland is alone capable to solve the question. (3) We think it superfluous to notice each of the symptoms of myxœdema. They are all recognised here: general

aspect, conformation of head, hairy condition of skin, brownish red hair on head, eczema, persistence of the fontenelle, puffing up and œdema of the eyelids, cheeks, hands and of feet, &c., absence of thyroid gland, increased violence of abdomen, umbilical hernia, absence of sexual appetite, clumsy walk, dull, special appearance, voice harsh, sharp, disagreeably obstinate constipation, arrest of development of generative organs. (5) We notice, as well as the peculiar shape, the existence of other maladies, of scrofulous lesions, and rachitic deformities, the vertebral column and the limbs which showed complications, how much the attack originally arose from nutrition by the absence of the thyroid gland, interested us above all. (5) All the myxœdematous idiots which we have observed, presented the same appearance, stupid, heavy and without expression. These are not utter idiots. Speech more or less imperfect exists in different degrees. It is the same with the memory. The attention also is able to be fixed. The comprehension is slow but not absent. Also these patients are capable of a certain education, all come to proper sense, are able to eat alone, a few are able to wash themselves, to clothe themselves, to sew, and to assist in the affairs of house-keeping. (4) The treatment which we have instituted in this class of cases consisted in the application of special methods of education for the backward infants, and from our point of view, the medical in tonics, anti-scrofulous remedies, salt baths, douches and gymnastics.

426. *Schmitz.—Can Diabetes be Transferred?*—Years ago the author observed diabetes occasionally in man and wife, and in the *Deutsche med., Wochensch.*, No. 48, ff., 1881, published eight such observations in 600 diabeties. He has since then accumulated several more cases, which now amount to twenty-six in a total of 2,320 diabeties. Persons considered healthy, mostly married women, have become suddenly diabetic after having nursed a diabetic for some time, (slept in the same bed, eaten and drunk from the same plates and cups, &c.) There was no hereditary disposition in any of the cases, and there was never any relationship between the cases. Also none of the patients (in the transference cases) had eaten much sugar, and none were arthritic. This coincidence in more than one per cent. of the cases cannot be merely accidental. The author reports seven selected cases as examples.

427. *Mayer on the Causation of Diabetes.*—Very little attention has been paid, the author thinks, to the circulation in diabetes, especially the heart. Pavy says nothing thereof in 1,360 diabeties; Schmidt mentions lowered cardiac activity. The author, in the years 1879-88, out of 380 diabeties found enlarged heart in 82 (21·6 per cent.) In the *post-mortem* records of the Berlin Pathological Institution, heart disease is found in 13 per cent. of the cases. This is a consequence of the overwork of the kidneys, which do not answer to the strain of separating the chemical irritants from the blood. O. Israel has shown that useless substances in the circulation may cause cardiac hypertrophy. This may, of course, end in atrophy. According to Seegen's new theory there are two perfectly distinct forms of diabetes; a light one involving only the liver cells, and a severe one, in which all the cells of the organism are implicated.

E. J. Edwardes.

428. *Preston on Hysterical Paralysis.*—Hysterical paralysis, one of the most prominent and characteristic members of that group of symptoms to which has been applied the general term hysteria, is, the author says, of cortical origin, but the cortical motor cells are not affected. The cause of hysteria may be bad training in childhood, over-indulgence, undue excitement, sudden fright and other like conditions. The pathogenesis of hysterical paralysis may be thus explained: Certain abnormal stimuli, or usual stimuli acting to an extraordinary degree, produce in the higher centres a condition of exhaustion such that these higher centres are no longer able to stimulate the lower or motor centres to a degree sufficient to produce a discharge. Paraplegia is the most common form of hysterical paralysis, but hemiplegia is not uncommon, particularly following marked hystero-epilepsy. The diagnosis of hysterical paralysis is often most difficult, and hence sad mistakes in prognosis are made.

George Brown.

Pharmacology and Therapeutics.

RECENT PAPERS.

432. Karpoff, Dr. Grigory I.—On the Diagnosis and the Creasote and Guaiacol Treatment, of Pulmonary Tuberculosis. (*St. Petersburg Inaugural Dissertation*, 1889, No. 96, p. 220.)

433. Malachowski, Dr. Anselm I. F. E.—A Contribution to the Pharmacology of Chloralamide (Chloralformamid). An Experimental Research. (*St. Petersburg Inaugural Dissertation*, 1890, No. 45, pp. 122 and xxxiv.)

434. Jakovleff, Dr. A. N.—A Novel Method of an Antiseptic Treatment of Dysentery. (*Proceedings of the Kalüga Medical Society for* 1889, October 19, p. 19.)

435. Shtcherbakoff, Dr. Afanasy S.—A Contribution to the Therapeutics of Diphtheria. (*Rüsskaia Meditzina*, No. 15, 1890, p. 299.)

436. Stewart.—On Hæmoglobin Compound in Therapeutics. (*Times and Register*, April 26, 1890.)

437. Rixa, Dr.—On the Treatment of Hay Fever. (*Therapeutic Gazette*, May 15, 1890.)

438. Russell, J. P. Risien, M.B., and Taylor James, M.A., M.B.—On Treatment of Epilepsy by Biborate of Soda. (*Lancet*, May, 1890, p. 1061.)

439. Hamilton, Chas. W.—On Kola Seed as a Remedy for Sea-sickness. (*Brit. Med. Journ.*, May, 1890, p. 1067.)

440. Murrell, Dr.—On Gurgun Oil as an Expectorant. (*Lancet*, May, 1890, p. 962.)

441. Hudson, Dr. A. T.—On Veratrum Viride in Tonsillitis. (*New York Medical Record*, May 10th, 1890.)

442. Editorial.—On the Revision of the American Pharmacopœia. (*Amer. Druggist*, May, 1890.)

Art. 432. *Karpoff on the Diagnosis and the Creasote and Guaiacol Treatment of Pulmonary Tuberculosis.*—Dr. Grigory I. Karpoff, Professor of M. I Afanasieff's clinic, in St. Petersburg, has carried out two extensive series of careful and prolonged observations with the aim (*a*) to elucidate a diagnostic value of tubercle bacilli and elastic fibres in the sputa of patients suffering from pulmonary phthisis; and (*b*) to study the therapeutic effects of creasote and guaiacol in the disease under consideration. The principal results derived from the investigations may be given somewhat as follows:—*A. Diagnostic observations.* [Seventy-five cases, in ten of which Koch's bacilli alone were present in the sputa; in twenty the bacilli were occasionally accompanied by elastic fibres; and in forty-five both the bacilli and elastic fibres were found invariably.] 1. A microscopical examination of the symptoms should occupy a most prominent place amongst clinical methods of diagnosis of pulmonary affections. 2. The best and most reliable method for examining the sputa is that introduced by Dr. Biedert (*Berliner Klin Wochenschrift*, No. 6, 1885). A routine employment of the method would greatly diminish the number of cases of the so-called "non-bacillary" phthisis. [In rough outlines, the method may be described as follows:—About a tablespoonful of the patient's sputum is diluted with two tablespoonfuls of water, thoroughly mixed with from five to twenty drops of a 33 per cent. liquor potassæ causticæ, slowly heated until linely ebullition, again diluted with four volumes of water, the mixture placed into a capacious conically-shaped goblet, resembling a champagne glass, and left to stand from twenty-four to forty-eight hours, after which the fluid is decanted, and the sediment is examined for Koch's bacilli.] 3. The presence of the microbes in the sputum constitutes the first essential diagnostic sign in initial stages of pulmonary tuberculosis, elastic fibres making their appearance much later 4. The number of the bacilli is very inconstant, and does not stand in any relation to the intensity of the pulmonary morbid process. As a rule, the bacteria are scanty in initial stages, become more abundant in the second stage of the disease, but begin to decrease in number in later periods. 5. A prolonged absence of Koch's rods from the patient's sputum can obtain a favourable prognostic significance only in such cases where it coincides with a steady increase in the bodily weight and a marked improvement of the patient's general state. 6. Elastic fibres afford another important diagnostic sign of pulmonary tuberculosis. Their prognostic value, however, is still greater, since the presence and numerical strength of the fibres enable us to determine the severity of the case given. At all events, their prognostic significance is more important than that of Koch's microbes. 7. The amount of elastic fibres in the sputum increases with that of destruction of pulmonary tissues, and generally oscillates in a direct relation to the severity of the disease. 8. It should be kept in view, however, that in extremely weakened patients with but a scanty expectoration, the amount of the fibres may be more or less trifling. 9. The quantity of elastic elements may also decrease in such rare cases of late phthisis where the destructive process has come to a standstill, and where there appears a pronounced tendency to cicatrisation and incapsulation of pulmonary cavities. *B. Therapeutic Observations.* [Thirty-one cases, ten of them in the first stage, ten in the second, and eleven in the third. Creasote and guaiacol were used in the shape of a solution prepared after the formula: ℞ Creasoti (vel guaiacoli) fagini ℈j; spiritus vini rectificati ℥jj; aquae menthae ℥iv. M. D. S. To take a tablespoonful in a half-tumblerful of water after meals, two, three, or four times daily. Every five or six days, the amount of the drug in the mixture was increased from four to eight grains until sixty grains had been reached. (*b*) Hopmann's solution (*Berliner Klin. Wochenschrift*, No. 52, 1887) made after the formula: ℞ Creasoti (vel guaiacoli) partem 1; tincturae gentianae, partes 2. M. D. S. To take ten drops in a half-tumblerful of water, after meals, twice a day, gradually ascending to twenty-five drops thrice daily. (*c*) Pills prepared after this formula: ℞ Creasoti (vel guaiacoli) ℈j; opii puri; plumb acetici, *āā* gr. v.; pulv. et extracti gentianae q. s. ut f. pil. No. 20. D. S. To take a pill three times daily, gradually ascending to nine or ten pills a day. (*d*) Bitchunsky's effervescent water, each bottle containing 0·1 or 0·2 gramme of creasote or guaiacol, five or ten cub. cc. of alcohol, thirty cub. cc. of syrup, and three or four drops of tincture of peppermint. It was given from one to four bottles a day. (*e*) Inhalation, at first five drops two or three times daily, subsequently in larger doses and more frequently]. 1. Both creasote and guaiacol decrease the amount of the sputa and alleviate expectoration, the discharge becoming more fluid and mucous. 2. Cough also decreases or ceases altogether. 3. The tubercle-bacilli become less abundant or even disappear entirely. 4. The bodily weight steadily increases. 5. Appetite and general state improve. 6. The physical signs also show a more or less marked improvement. 7. These beneficial effects, however, are observed mainly in complicated cases; in those complicated with renal or gastro-intestinal affections, the treatment mostly remains unsuccessful; neither does it manifest any favourable influence in fulminant cases (*phthisis florida*). 8. When administered in reasonable doses, the drugs do not give rise to any disagreeable accessory phenomena. 9. A prolonged duration of the treatment is more important therapeutically than a steady increase in the daily dose of the drugs. 10. The highest internal daily dose of creasote or guaiacol, giving the most favourable results, without producing any unpleasant concomitant effects, oscillates between eight and twelve grains. The doses over fifteen grains give rise to nausea, vomiting, anorexia, and loss of the body's weight. The doses under five grains a day prove to be altogether useless. 11. Under the ordinary hospital conditions, the treatment may bring about only amelioration, but hardly can lead to an actual cure. The best results may be expected from an internal administration of creasote or guaiacol, combined with an appropriate climatic and dietetic treatment. 12. The best preparations are afforded by the effervescent creasote or guaiacol waters, which are taken by the patients very readily. 13. Guaiacol should be preferred to creasote since the former represents a chemically-pure and constant substance. 14. The best test for differentiating between (cheap) beech creasote and (expensive) guaiacol is that proposed by Mr. G. M. Bitchunsky. One cub. cœ. of the preparation examined should be dissolved in ten cc of a 90 per cent. alcohol, and four cub. cc. of the solution mixed with ten cc. of pure sulphuric acid. In the case of guaiacol, the mixture assumes a permanent rosy colour; in that of creasote, a cinnamon-brown one.

433. *Malachowski on the Physiological Effects of Chloralamide.*—In order to study the biological effects of the new hypnotic (introduced by Professor Mering, and patented by the *Berliner Chemische Fabrik*), Dr. Anselm I. F. E. Malachowski (pron. Malakhovskee; a Polish name), of St. Petersburg, has undertaken an extensive course of experiments on frogs, lampreys, rabbits, and dogs. The essential outcome of the researches, which were conducted under Professor S. A. Popoff's guidance and at his suggestion, may be briefly summed up as follows:—*A. Cold-blooded animals* (57 experiments on frogs, and "several" on lampreys. The drug was introduced into lymphatic

sacs or veins, in the shape of a 5 or 2·5 per cent. solution.) 1. Chloralamide kills frogs only when administered in rather large doses. The doses of from 0·07 to 0·1 gramme, as a rule destroy the animals' life in one or two scores of minutes. Occasionally, however, even a 0·05 dose may be followed by death occurring then on a second or third day after the injection. 2. In the dose of 0·025 gramme and upwards, the drug gives rise to an early disco-ordination of movements, with subsequent torpor and drowsiness, which phenomena are caused by a direct action on the brain. 3. In doses over 0·01 gramme, the remedy markedly depresses, and, ultimately, totally paralyses reflex action, which is dependent upon the drug affecting the spinal reflex centres. 4. The medicament does not produce any marked influence on either motor or sensory nerves, or muscle substance. 5. It retards and, in toxic doses, ultimately arrests respiration through paralysing the respiratory centres. 6. It retards and ultimately temporarily arrests the heart through exciting the peripheral cardio-inhibitory apparatus. In cases of fatal poisoning, it paralyses the musculo-motor apparatus of the heart, the organ being arrested in diastole. The cardiac paralysis, however, invariably develops later than that of respiration and other toxic symptoms. 7. In lampreys, chloralamide induces paralysis of respiration and motion (the fishes becoming unable to attach themselves with their mouths to objects. *B. Warm-blooded animals.* [65 experiments. The remedy was introduced either into the stomach (with food or by means of a gastric tube), or under the skin, or into veins; in the latter two cases it was injected in the form of a 5 per cent. aqueous solution]. 1. Chloralamide acts literally when injected into veins in the dose of 1 gramme per one kilogramme of the animal's weight; or, when injected subcutaneously in the dose of 1 gramme per kilogramme; or, when given internally, in doses considerably larger than 1·5 grammes per kilogramme." 2. In the doses of 1·0 (internally), 0·5 (hypodermically), and from 0·25 to 0·5 (intravenously), per kilogramme of the animal's weight, the drug produces a deep and prolonged sleep, which is usually preceded by languor and drowsiness, and only in exceptional cases by high excitement. 3. Even in small doses, the remedy markedly lowers excitability of the brain. 4. It most powerfully depresses excitability of the spinal cord. 5. It invariably gives rise to inco-ordination of movements, the effect being caused by the drug's direct action on the central nervous system. 6. It depresses reflex action through affecting the spinal reflex centres. 7. It lowers the arterial tension through paralysing the vaso-motor centres. 8. It quickens the cardiac action through depressing the cardio-inhibitory apparatus, and, in the same time, markedly increases the energy of cardiac contractions. 9. It raises excitability of the respiratory centres. 10. It lowers the bodily temperature, the depression being dependent upon both an increased loss of systemic heat through the skin, and a decreased heat-production. [Small doses give rise to a short-lasting fall varying from 0·4° to 2·7° C. In the case of middle doses, the temperature usually falls 2·5° C. in two hours after the introduction of the remedy, while in that of large and toxic ones the temperature may sink 10° and even 16° C. in from four and a half to 24 hours after a dose.] 11. In dogs, chloralamide causes considerable gastro-intestinal disturbances (anorexia, vomiting, and mucous stools, sometimes mixed with blood), whichever the mode of the administration might be. 12. During the chloralamide sleep there is observed an extreme contraction of the pupils, which disappears on the animals awakening as well as on the appearance of convulsions. 13. Middle and large doses may bring about short fits of general tonic and clonic convulsions with dilatation and immobility of the pupil. 14. The drug does not manifest any marked influence on sensory nerves.—*C. Therapeutic Corollaries.* 1. Chloralamide will certainly find a prominent place amongst hypnotics. 2. The remedy affords a powerful antidote to strychnine. 3. In the presence of morbid conditions of the circulation or digestive tracts, it should be resorted to with great caution.

434. *Jakovleff on Calomel and Bi-sulphide of Carbon in Dysentery.*—Dr. A. N. Jakovleff, of Kalüga, warmly recommends the following antiseptic treatment of dysentery, which proved very successful in eight cases from his recent practice. As soon as a case has come under observation, calomel in one or two grain doses should be given internally every hour until the appearance of characteristic (of the drug) stools. In the course of the same day, two enemata should be also administered, each made of one-and-a-half ounce of Dujardin-Beaumetz's bi-sulphide of carbon water, and an equal quantity of ordinary water. From the next day, the bi-sulphide water should be given internally, a tablespoonful in a half tumblerful of water, or milk, six times daily, the dose being gradually increased to ten tablespoonfuls a day. The *aqua carbonei sulphurati* should be prepared after the formula: ℞. Carbonei sulphurati purissimi, 25 grammes; aquae distillatae, 500·0; olei menthae piperitae gtt., 50. The ingredients are placed into a vessel measuring about 700 cubic cc. The mixture is thoroughly shaken, and then left to stand until sedimentation. Only the upper strata of the fluid should be used for the therapeutic purposes. Each litre of the preparation contains about two grammes of dissolved bi-sulphide of carbon. In all the eight cases of the author's (five of which had been previously treated after ordinary plans with unsatisfactory results) a steady improvement rapidly set in, to speedily end in a complete recovery

435. *Shtcherbaroff on the Treatment of Diphtheria.*—Dr. Afanasy S. Shtcherbakoff, of Rostov-on Don, emphatically draws attention (1) to the necessity of resorting to anti-diphtherial treatment in every case of sore throat, and that as early as possible, since it occurs only too often that an apparently pure and simple angina transforms into a typical diphtheria in some twenty-four hours, to swiftly end in death; and (2) to the fact that diphtheria arises as a purely local morbid process, and passes into a systemic affection only subsequently (though often very rapidly); hence an early and energetic local treatment is always indicated. In his experience, the following means give best therapeutic results:—(1) Painting the throat with this mixture—℞ Acidi boracici, gr. xv; olei martis, ʒj—℥j; glycerini, ℥j—℥ j55; M.D.S. To paint every two or three hours; later on, at longer intervals. (2) Frequent steam irrigation of the fauces with lime water. (3) Gargling with the mixture: ℞ Infusi herbae salviae, lb. j; sodii biboracici, ℥j; mellis despumati, ʒ ss: M.D.S. To use frequently. (4) Painting the neck with tincture of iodine, with subsequent application of hot compresses. (5) Internally, antipyrin in full doses, twice daily, and wine. (6) Hot milk diet.

Valerius Idelson, M.D.

436. *Stewart on Hæmoglobin Compound in Therapeutics.*—For some years the administration of bullock's blood, either as a drink or per rectum, has been common for anæmia, phthisis, etc. The results have been highly beneficial, but the idea is so repulsive to patients that dried blood has been introduced. This, however, has the disadvantage of being insoluble, and of having an unpleasant colour and taste. The writer devised his "hæmoglobin compound" in order to get over these difficulties. It consists of:—3 ounces fresh defibrinated bullock's blood, 3 ounces extract of malt, 1 ounce glycerine, 1 ounce whisky. The dose, to begin with, is twenty drops thrice a day, but it may be increased to one or two tablespoonfuls. For infants the dose is three to ten drops at each feeding. The hæmoglobin compound is indicated in anæmia, anorexia, dyspepsia, hæmorrhages, and convalescence from acute diseases or surgical operations. In impending asthenia it has proved successful even in cases where transfusion was contemplated.

Rixa on the Treatment of Hay Fever.—Dr. Rixa, of New York, has been fortunate enough to have a patient willing to be experimented upon for this complaint. The list of remedies used is a formidable one, and includes antipyrin internally and locally, boric-acid spray, cocaine spray, morphine, atropine, cauterisation with pure carbolic acid, eucalyptus, solution of menthol in olive oil and antifibrin. Many of these gave temporary relief, but no treatment was satisfactory until peroxide of hydrogen spray (Marchand's) was used. Since then the writer has employed it in other patients and with the same success.

Ralph W. Leftwich, M.D.

437. *Russell and Taylor on Treatment of Epilepsy by Biborate of Soda.*—Some of the cases in which borax has been successfully used in epilepsy are collected in this paper, and prove that it is a drug worthy of more extensive use. Fifteen to thirty grains given three times a day with meals has cured cases that were not amenable either to bromides or arsenic. Some ill effects occasionally follow the use of the drug, such as vomiting and eczematous eruptions. The authors give a table of twenty cases, in all of which more or less marked improvement resulted. In section 1316 : 2 of the Medical Digest Appendix several papers upon the subject are noted, and subsequent to the issue of this work other references may be found in the *Medical Press and Circular*, July, 1887, p. 78, and in the *Lancet*, Feb., 1890, pp. 304, 909.

438. *Hamilton on Kola Seed as a Remedy for Seasickness.*—The internal administration of half-a-drachm of kola seed has given Mr. Hamilton every confidence in this distressing affection, and he believes that in kola and its alkaloid we have a reliable means of cure, and urges a more extended trial of its virtues.

439. *Murrell on Gurjun Oil as an Expectorant.*—As balsam of copaiba has been found a useful expectorant in the hands of Dr. Walshe and Dr. Murrell, the latter gentleman was anxious to find one equally efficacious without the objections to which copaiba is liable, viz., taste, and the resulting cutaneous rash so frequently induced by its exhibition. Gurgun oil, the product of the *dipter ocarpus turbinatus*, seemed likely to fulfil the conditions required. Two drachms, mixed with one ounce of extract of malt, given thrice a day, can be easily taken. In several cases it acted admirably in "clearing the chest," and is seldom followed by any rash.

Richard Neale, M.D.

440. *Hudson on the Treatment of Tonsillitis by Veratrum Viride.*—According to the best evidence attainable in favour of the ordinary methods of treatment of tonsillitis, says Dr. Hudson, not more than ten per cent. recover without suppuration. His experience of veratrum viride justifies him in saying that by its use these figures may be reversed and 90 per cent. of cures be effected without suppuration taking place. To accomplish this, treatment must be begun within twenty-four or thirty-six hours of the onset of the attack, and before the congestion and inflammation have progressed to molecular impairment. He gives four to five drops of the tincture every three hours. Often three or four doses will stop the congestion, produce sweating, and cause permanent relief. When nausea occurs as a symptom an eighth of a grain of morphia may be added to each dose of veratrum.

George Brown.

441. *On the Revision of the American Pharmacopœia.*—By direction of its predecessors the Seventh Decennial Convention for Revising the Pharmacopœia has drawn up a plan indicating the general principles which, in its judgment, should guide the next revision. The main points of the report are as follows:—*Assay processes for drugs* should be appended to the descriptions of the more energetic or otherwise important drugs containing active principles, provided the therapeutic value of the drug depends upon the amount of those principles, and also that these principles can be assayed and identified with reasonable accuracy and without requiring complicated processes. The committee may attach a note stating the usual percentage of these active principles in good commercial samples of the drug, and, if it be found feasible, it may attach a requirement that the drug shall not be used unless it conforms to these stated limits. *Assay processes for Galenical preparations* may be attached by the committee to fluid extracts, tinctures, &c., but it shall omit requirements of a definite strength or percentage of active principles except in the case of drugs for which an upper or lower limit, or both, ot active principles is prescribed. *Assay processes for opium and cinchona.* Those shall be adopted which are found to yield the largest proportion of the desired active principles with greatest uniformity and with least manipulative difficulty. *Descriptions of chemicals and tests.* In the case of chemicals the degree of purity, or the allowable percentage of impurity, shall be prescribed as closely as practicable. The standard of purity shall be set as high as practicable for legal enforcement, but not beyond a point reasonably attainable by the manufacturer without subjecting any particular product to unnecessary cost through the enforced removal of some harmless and insignificant accidental impurity. *Chemical formulæ* shall be given only in the new notation. *Proprietary or patent articles* shall not be introduced into the Pharmacopœia. *Nomenclature.* In the choice of titles of official articles, it is recommended that convenience, established custom, and considerations of safety against mistakes, through similarity of, or changes in, names, should out-weigh purely theoretical considerations or scientific preciseness. *Specific gravity.* Define the exact degree of temperature of the standard by which other specific gravities are to be determined. Specific gravities of official liquids to be determined and stated, so far as practicable, on established temperature and other conditions of the standard. *Weights and measures.* Solids to be weighed, liquids measured, and metric system to be used. *General formulæ*

recommended for fluid extracts and other preparations that have duplicate processes: formula to be indicated by reference. *Strength of tinctures, acids, &c.* It is left to the judgment of committee to make the strength of all official tinctures, wines, and dilute acids ten per cent. In the case of acids to be ten per cent. of the official acid and not of the absolute acid. Infusions and decoctions to be five instead of ten per cent. as heretofore.

David Walsh.

442. A Remedy for Chilblains. (*Jour. Cut. and Genito Urinary Diseases*, Feb. 1890).—℞ zinc sulph. ac. tannic., aa. 2·0, aquæ rosae, 30·0.

Morgan Dockrell, M.A., M.D.

Gynæcology and Obstetrics.

RECENT PAPERS.

434. Pommer G.—On a Case of Fœtal Inclusion in the Peritoneum. (*Ber. des Naturw. Med. Vereins zu Innsbruck.*)

435. On the Diagnosis and Treatment of Salpingitis, (*Med. News*, May 17th, 1890.)

436. Routh, Dr. Amand.—On Urethral Diverticula. (*Trans. Obstetrical Soc.*, Part 1., 1890.)

437. Hirst, D. Barker.—On Three cases of Varicose Veins in the Broad Ligament (*Med. News*, May 17, 1890.)

438. Davis, Dr. E. P.– On a case of Abscess in the Abdominal Wall complicating Fibroid Tumours of the uterus.

439. Madden, Dr. T. More.—On the Prevention and Treatment of Hæmorrhage after Delivery. (*Hospital Gazette*, May 24, 1890.)

440. Duke, Dr. Alexr. — On the Mechanical Treatment of Amenorrhœa. (*Med. Press and Circular*, May, 1890.)

Art. 434. *Pommer on a Case of Fœtal Inclusion in the Peritoneum.*—A tumour about the size of a child's head was removed by operation from the abdomen of a female, aged 28, who had been aware of its existence for 13 years. It lay above the symphysis and somewhat to the right side, and was connected with the anterior abdominal wall and with the peritoneum. Posteriorly it was free, inferiorly it was fixed by inflammatory adhesions and by a string as thick as a finger to the uterus. It consisted of a capsule and contents. The former, which was 7mm. thick, consisted of four layers; two outer of differently arranged connective tissue with vessels, and in places unstriped muscular tissue. The third was of striped muscular tissue, and the innermost resembled somewhat the appearance of skin, in which cutis and epidermis had undergone hyaline degeneration. It was also beset with hairs. Calcareous deposits in the form of plates and knobs in places replaced the capsule in its whole thickness. The tumour was filled with a number of structures like limb stumps, united to the capsule by their broader surfaces and to one another by a folded membrane. The interstices were filled with a greasy substance of the colour of the yolk of an egg, which consisted of epidermal cells, fat globules, yellow pigment granules, detritus and long fair hairs. The limb-stumps and their connecting membrane were covered by skin with hair like the inner layer of the capsule The limb-stumps consisted of connective tissue with fragments of bone and cartilage, and in places voluntary muscle in a state of hyaline degeneration. Only one piece had any resemblance to any part of the body; this was most probably Meckel's cartilage with the rudiment of the bony inferior maxilla. Another part of the tumour presented appearances like those of the rudiments of the eye. Teeth were also present. A portion of the cæcum with vermiform appendix was also found. The author looks upon the whole tumour, not as a dermoid cyst, but as a degenerated twin, or double monstrosity. The undeveloped twin was included in the muscle-plate region of the other embryo.

Bertram C. A. Windle, M.A., M.D.

435. *On the Diagnosis and Treatment of Salpingitis.*—In an editorial in the *Medical News*, salpingitis is divided into catarrhal or vegetating; suppurating salpingitis, whether from septic, puerperal, gonorrhœal, or tuberculous infection; tubal dropsy; and hæmatoma of the tube occurring without inflammation, often the earliest stages of tubal gestation. The anatomical structure of the fimbriated extremity of the tube is such as to favour the retention of secretions and predispose to inflammations. In a very large percentage of cases these affections are the result of endometritis, which often follows puerperal sepsis. It is easy to understand how a specific, tubercular, septic, or cancerous infection in the endometrium should result in salpingitis; but an explanation is not so apparent in the case of virgins, in whom none of these causes have been present; when we consider that the infectious diseases of childhood not infrequently result in inflammation of the valva and vagina, a rational explanation is found for such cases. Bacteriology confirms these points by demonstrating the presence of the various infectious micro-organisms. Regarding clinical history, the disorder frequently runs an insidious course. With the exception of cases of acute infection, resulting in pelvic peritonitis, the disease may persist as such. Functional troubles are its first evidences, with indefinite pains, soreness, tenderness upon palpation, great discomfort in almost every attitude when prolonged, irritation about the bladder and rectum, and disordered menstruation. The occurrence of salpingitic colic is a very significant feature; it is characterised by sudden lancinating pains, which the patient compares to the pains of labour, referred to the hypogastrium or the location of the tube, ceasing suddenly, followed by the expulsion of several teaspoonfuls of serous or bloody fluid, expelled by the spasmodic contraction of the muscular tissue of the tube. If a tumour has been previously found, upon examination, after one of the paroxysms, it has disappeared. A dislocation of the uterus ordinarily becomes reduced after the tube is emptied. A continuance of adhesive inflammation obliterates the fimbriated extremity of the tube, causing sterility. Vaginal examination discloses the tube enlarged, feeling like an irregular nodulated cord, in size and elasticity like the femoral artery, and exquisitely painful upon touch. The best method of examination is that with the patient upon the back, the thighs well flexed upon the abdominal wall, and a mild degree of anæsthesia is frequently necessary. The subacute varieties of salpingitis develop a tumour, which renders diagnosis more easy. To differentiate this form from conditions resembling it, retroflexion, prolapse of the ovaries, ovarian cyst, phlegmon of the broad ligament, uterine lymphangitis, and tubal gestation, must be considered, though the latter can seldom

be recognised with positiveness as more than a tubal hæmatocele. The prevention and treatment of endometritis are of the greatest importance in the prophylaxis of salpingitis. Such should consist of absolute rest in bed, and disinfection of the genital tract by antiseptics. If this does not promptly reduce an elevated temperature, the uterus should be curetted, thoroughly washed out, and disinfected with iodoform When salpingitis exists it should be treated first by securing free and thorough drainage by dilating the uterus, removing vegetations of the endometrium, which frequently occlude the uterine openings of the tube, and disinfecting the uterine cavity. A tupelo tent furnishes an excellent dilator in these cases, and the curretting should be followed by the application of iodine and carbolic acid, or of carbolic acid and glycerin, or creasote and glycerin, to the interior of the uterus. Drainage may be kept up by the insertion of a strip of gauze saturated with iodoform or salol in glycerin, which should be carried to the fundus, and allowed to remain there; the gauze may be renewed every two or three days, and its application continued for several weeks. Uterine suppositories, containing salol or iodoform, may also be used to advantage. The general treatment of the patient consists in absolute rest, in counter-irritation over the hypogastrium by the thermo-cautery, the application of which leaves a surface healing more rapidly, and less apt to suppurate than that produced by blisters; massage; the administration of tonics addressed to the patient's nutrition; the application of the faradic current, and careful attention to assimilation and excretion. Laparotomy should be performed only in urgent cases, when the presence of large tubal or pelvic abscesses threatening septic infection is diagnosed. In chronic pelvic peritonitis which resists other treatment, laparotomy, with extirpation of diseased tissue is justifiable. It must be emphasised that these cases belong properly to the field of gynæcology, and not to the domain of surgery.

436. *Routh on Urethral Diverticula.*—This paper forms a valuable contribution to the literature of the above subject, which, though dating from 1847, is scanty and scattered. The *symptoms* are progressive discomfort and frequency of micturition, dyspareunia, and the formation of a swelling which appears at the vaginal orifice. Pressure upon the swelling causes thin and offensive pus to pass into and out of the urethra. The diverticulum differs from dislocation of the urethra and from simple dilatation of that canal. It is essentially a urinary pouch, or cyst, communicating usually with the middle third of a urethra of normal calibre by a narrow orifice. Ætiology appears to be—(1) Closure of the ducts of pre-existing urethra glands, retention cysts resulting. Suppuration and ulceration into the urethra by a small, often valvular, hole follows, and the inflammation is kept up by urine trickling into the sac at each act of micturition. (2) Blood cysts which have passed through similar changes. (3) The formation of pseudo-cysts by injury to the urethral floor during labour or instrumentation. Pregnancy, with its increased local activity, seems usually to induce the formation of these cysts, and parturition appears to be often the immediate cause of the rupture. The *treatment* is mainly surgical. (1) *Where uretheritis or cystitis exists*, the cyst-wall should be dissected out, and cut off close to the urethra, and the vaginal wound left open for drainage. (2) *Where the urinary passages are healthy*, the cyst should be dissected out, the opening into the urethra enlarged to allow of drainage, and the vaginal wound at once closed. In either case the urine should be drawn off until union is assured. In examination a sound passed along the *anterior* wall of the urethra goes directly into the bladder, proving that the case is not one of urethral dislocation. Diagnosis from dilatation: A large-sized sound passes into bladder, while a small one enters the opening (often valvular). With a bougie in the urethra the sac is felt to be quite distinct, and even when emptied by pressure it remains a thick-walled cyst. When full, these cysts vary in size from a pea to that of a hen's eggs. After being emptied, it only partially refills at the next micturition, taking six or eight hours to become tense by exudation from its own lining membrane. The history of three cases admitted to the Samaritan Free Hospital is appended, together with an account of the literature of the subject.

David Walsh.

437. *Barker on Three Cases of Varcose Veins in the Broad Ligament.*—Case 1. A woman, who had given birth to two children, one living, the other destroyed by the forceps, was seen after she had been in labour many hours. The child's head was tightly jammed down upon the brim; the os was well dilated, the lower uterine segment stretched to a dangerous degree. Forceps had already been tried several times without success. Craniotomy was performed with no difficulty, and extraction was easily effected. A careful examination was made for a rupture of the uterus, but no sign of it was discovered. The woman did perfectly well for eighteen hours; then suddenly went into collapse and died shortly afterwards. A careful post-mortem examination showed the cause of death to be a ruptured bloodvessel in the outermost portion of the left broad ligament and hæmorrhage into the peritoneal cavity. Case 2. M. N., aged thirty-nine, had had four children, the last six years ago. She has been a widow for several years. Menstruation had been regular until six weeks before the patient came under my observation; at that time, during a menstrual period, she attempted to carry a heavy coal-scuttle up a flight of stairs, but on the way was seized with violent pain in the abdomen and faintness. After this there was a constant flow of blood from the uterus, associated with pain in the left hypogastric region. The day on which I first saw the patient, she had taken a long journey; waile walking across one of the court-yards she fell to the ground in a faint, and was taken into the hospital. An examination under ether revealed free fluid in Douglas's pouch and an induration in the left broad ligament. Laparotomy was done the following morning in the belief that the case was one of ruptured tubal pregnancy. On incising the peritoneum a large quantity of dark blood welled out; clots were found adherent to the intestines, and in the left ligament was a mass of old clotted blood which could be seen and felt through a rent in the posterior layer of the peritoneum covering the ligament. The tube was intact. As there was no traces of fresh hæmorrhage, the clots were picked from the intestines, the fluid blood washed out of the peritoneal cavity, and the abdominal wound closed without drainage. Her recovery was uninterrupted. Case 3. L. B., aged thirty years, has had six children; the last, two years ago. The day following this delivery she was obliged to do some heavy housework. Since that time she had suffered from severe recurrent pelvic pains, which incapacitated her for work. A week before entrance into the Philadelphia Hospital she

aborted in the early months of pregnancy. On examination, a rather large and exceedingly sensitive tumor, which felt cystic, was discovered in Douglas's pouch. The uterus was anteverted and fixed. The examination, although carefully conducted, lighted up a sharp attack of pelvic peritonitis, which, however, quickly subsided under treatment. A subsequent examination confirmed the result of the first. With the idea that pyosalpinx would be discovered, laparotomy was advised and agreed to. A tumor was found in the right broad ligament and behind the uterus, to which it was loosely adherent by inflammatory exudate. It was seen to be independent of the tube, which, though slightly enlarged, presented a fairly normal appearance. On bringing the mass in sight, it was startlingly like a loop of intestine; placing intestine and tumor side by side, there was absolutely nothing to distinguish them in appearance. The ligature had already been placed below the tumor, but not tied; an incision was made in it to discover its nature and a great gush of blood told the tale. The thread was quickly and firmly tied, and the mass removed. It was found to consist of many blood-vessels, into some of which I could place the tip of my little finger. The woman made a good recovery, but this remained some exudation on the right side.

438. *Davis on a case of Abscess in the Abdominal Wall complicating Fibroid Tumors of the Uterus.*—The patient was 40 years of age, and had been married ten years; no children; no miscarriages; menstruation began at the age of thirteen, and was always regular. Five years ago she had much pain and a small swelling in the abdomen, which increased in size, the pain being always present except during menstruation. A second swelling on the left side developed within three weeks of her admittance to hospital; since then she had been unable to work, and generally confined to her bed; leucorrhœa was always present; she suffered from sharp pains, shooting posteriorly from the uterus, except during menstruation; she had headache occasionally, but had a good appetite. For the past six months she had lost flesh. Shortly after her admission an abscess formed at the swelling, described by the patient as occupying one side of the abdomen, and ruptured spontaneously. The cavity was washed out, and packed with iodoform gauze. The examination of the patient disclosed the presence of multiple uterine fibroids of large size. The introduction of a probe or of the finger in the abscess cavity gave the impression that the cavity was in one of the fibroids, a portion of which had suppurated through the abdominal wall. Following the rupture of the abscess and its washing out, the patient suffered but little, and it was proposed to allow the abscess cavity to close by drainage, and then, if practicable, to perform hysterectomy. About ten days after admission the patient was brought before the class a second time, the abscess cavity was washed out and tamponed with iodoform gauze, without occasioning especial pain or giving rise to collapse; the patient was kept carefully recumbent, but, while being taken to the ward, she complained of sudden faintness, collapsed, and death followed. The most rational cause for death seemed to be embolism, probably septic in origin, from the abscess cavity. A few hours after death a *post-mortem* examination was made by Dr. Coplin. The pelvis was found completely filled with a tumour lying in what had been the posterior *cul-de-sac.* The anterior surface had pushed the vagina, urethra, and bladder upward and forward, so that the anterior vaginal wall was shaped like an inverted italic *S*, the upper end of the *S* being at the os uteri and the lower at the vulvar outlet. The bladder was entirely raised out of the pelvis, and pushed forward over the pubic bone. This tumour had for its origin or pedicle the posterior lip of the uterus, and was attached as far up as the middle third of the lower uterine segment. It was firmly adherent to the surrounding soft parts and viscera; it was hard and inelastic, and its surface was smooth, although somewhat irregular. Rising from its upper extremity was what seemed to be the uterus itself, more than trebled in its longitudinal axis and with a diameter from before backward of four and one-half inches, and from side to side of five and one-eighth inches, and extending upward to the umbilicus; its surface was irregular but smooth, and had three subserous fibroids, one of which was sessile, and two having distinct pedicles. The right ovary was normal; the left, only partially to be made out, was the site of a cyst about the size of a goose-egg. The omentum was firmly adherent to the cyst, and, by bridges, to the wall of the cavity and to the transverse colon, which was pulled down and adherent to the abdominal wall at a point corresponding to the external opening. The adhesion, more properly speaking, was to the parietal peritoneum, just external to which was an abscess cavity lying between the muscular wall and the parietal peritoneum. No direct communication could be demonstrated microscopically as existing between the cavity of the bowel and the abscess cavity, but there is reason to infer that such was the case.

439. *Madden on the Prevention and Treatment of Hæmorrhage after Delivery.*—The author has met with only three instances of fatal hæmorrhage after delivery or within the prescribed period; and each of these resulted from circumstances which might properly be excluded from consideration in these observations, namely, inversion and rupture of the uterus, and secondary hæmorrhage consequent on malignant small-pox. Putting aside, therefore, such exceptional cases as those just alluded to, it will be found that, as a rule, post-partum hæmorrhage is a preventable accident. In the great majority of cases it results directly from inertia or insufficient or irregular contraction of the uterus, the normal contractibility of the muscular fibres of which is, as was long since well expressed by Blundell, "Nature's tourniquet against hæmorrhage after delivery." In a certain proportion of instances post-partum hæmorrhage is traceable, to parturient lacerations of the cervix, more especially in cases of assisted or instrumental delivery, before the sufficient natural dilation of the os uteri has been effected. In such cases the bright arterial hue of the blood will enable us to recognise the cause of the hæmorrhage, and to distinguish it from that coming from the uterine sources in the ordinary flooding from inertia. Lastly, in not a few instances, the predisposing cause of post-partum hæmorrhage may be discovered in the now somewhat prevalent hæmorrhagic diathesis. He advocates prophylactic measures in the latter months of pregnancy for the purpose of warding off the possible occurrence of flooding after delivery. This is especially necessary in dealing with multiparæ, who are thrice as liable to that complication as patients in their first labour. He has, therefore, for many years made it a rule to administer tincture of perchloride of iron, or some other ferruginous tonic, for a couple of months or so before the expected date of confinement. With the same object the patient should also be made to wear a well-fitting abdominal belt or binder throughout the latter months of gestation, as suggested by Dr. Duke.

The support thus given to the distending uterine walls and abdominal parieties is not only a great comfort to the patient, but is also, as I have found by experience, most useful in increasing the contractibility of both, and thus warding off subsequent hæmorrhage. He points out that the state of the circulation during, and at the termination of, the second stage, affords a very important indication as to the probability of postpartum hæmorrhage. He advocates manual compression of the uterus as the child is forced down, and he endeavours to render this more certain by administering ergot in full doses as soon as the os is fully dilated, there being, of course, no other obstacle to delivery than want of expulsive force. He points out that when ergot is given in cases in which there is no obstruction to delivery, no drug has yet been found of equal value in the treatment of inertia of the uterus leading to subsequent hæmorrhage. If, notwithstanding all these precautionary measures, this accident should nevertheless occur, and assuming that the placenta and membrane have been completely expelled, and that—as is the case in the majority of instances we are dealing with, flooding from imperfect contraction or inertia of the uterus—then the fundus being still grasped from above, a strong solution of alum in water, as hot as can possibly be borne by one's own hand, should be thrown into the uterine cavity until, all clots and *débris* being cleared away, the water returns clear and the uterus contracts firmly. Should that, however, not soon be the case, then no time should be wasted in trying any of the vaunted styptics sometimes relied on (of which, I may add, probably the two best are Dr. Barnes' strong solution of perchloride of iron, and secondly common turpentine); but the hand—first, of course, thoroughly cleansed and rendered aseptic by the use of strong carbolic soap and the nail brush—should be at once introduced gently and carefully into the uterine cavity, counter pressure being at the same time made from without by the other hand, the grasp of which over the fundus should never be relaxed until that firm and permanent contraction which is essential for the safety of our patient has been effectually secured. In like manner, if called to a case of more remote or secondary postpartum hæmorrhage—in which, though there may be no external loss, the symptoms of collapse shortly after delivery point to the occurrence of internal or concealed hæmorrhage—the binder must be at once removed, the clot pressed out, and the hand, if necessary, introduced and retained *in utero* until its secure contraction is obtained.

440. *Duke on the Mechanical Treatment of Amenorrhœa.*—According to the author, the mechanical treatment of amenorrhœa, by the introduction of an uterine stem to be worn for some time, has been frequently followed by good results. The danger, however, of using intra-uterine stems, compels the practitioner to enforce the necessity of the recumbent position of the patient as a general rule. As this becomes exceedingly irksome, sufficient time is seldom allowed to obtain the looked-for result. A uterine stem to be worn with comfort should be flexible—the proper length so as not to touch the fundus—freely moveable, and require no vaginal support in addition. The difficulty of making such a stem self-retaining has been clearly shown by the various modifications met with. A properly fitting stem answering to the description already enunciated should also permit of the patient going about as usual; the exercise contributing in no little degree to the desired effect of the stem. He doubts the value of the galvanic stem (so called), having tried it in several cases, and he believes that the same good would accrue from the use of *any foreign body in the shape of a stem pessary*. The uterine stem he now recommends is formed of spiral wire, which he originally designed for the purpose of keeping the os and cervical canal patulous after the operation of division for stenosis. These stems are sold by Messrs. Arnold and Sons of West Smithfield, London, and are made in various sizes; so that if a proper one be chosen the patient can go about as usual, and be quite unconscious of wearing such. He does not advocate the indiscriminate use of the stem as a cure for amenorrhœa in all cases, but only in those where the usual orthodox treatment had been previously tried and failed, and where the symptoms complained of are such as to warrant mechanical interference. The stem should be fully introduced its entire length into the cervical canal. The base of the stem being flat and very light, the vaginal walls embrace it closely and in such a way as prevents its expulsion.

ALFRED S. GUBB.

Diseases of the Nervous System.

RECENT PAPERS.

436. MAUDSLEY, DR. — On a Case of Cerebellar Disease.

437. BINSWANGER, PROF. OTTO.—On Psychic Disturbances of Standing and Gait. (*Berliner klin. Wochensch.*, Nos. 20, 21, 1890.)

438. THOMSON, DR. W. H.—On Functional Nervous Diseases (*Journ. of Ment. and Nervous Diseases*, New York, April, 1890.)

ART. 436. *Maudsley on a Case of Cerebellar Disease.*—In the Transactions of the Inter-Colonial Medical Congress of Australasia Dr. Henry Maudsley records an interesting case of cerebellar tumour, in which an exploratory trephining and removal of diseased brain substance was followed by good results. A gentleman, aged 28 years, began to suffer from headache in September, 1886, chiefly in the occipital region. It was more or less constant, but paroxysmally worse. In December, 1886, he began to suffer from attacks of vomiting, and during the attacks the pain in the head was "agonising." In July, 1887, he began to suffer from giddiness, and his gait became affected. In August, 1887, dimness of vision came on, first in the left eye, and in a month he was blind. About the same time deafness in the left ear came on. In January, 1888, he was first seen by the author. He then complained of headache, vomiting, blindness, and deafness on the left side; he had complete loss of smell, with slight paresis in all the muscles supplied by the facial nerve. On examining the fundus oculi there were all the indications of white atrophy consecutive to neuritis. There was no actual motor paralysis of the limbs, but the movements of the left arm and leg were awkward. There was no history of a blow or of syphilis, and no family history of tubercle. Dr. Maudsley diagnosed a tumour in the left lobe of the cerebellum. On April 20th, Mr. Fitzgerald made an incision through the scalp, and turned back the soft parts so that he could trephine below the line of the lateral sinus. On removing the bone the cerebellum was noticed to bulge out; and on incising the dura mater a quantity of the cerebellum ran away. Mr.

Fitzgerald then introduced his finger and came on what seemed to him to be a solid nodular growth fixed to the temporal bone. No attempt was made to go any further, and the wound was stitched up and dressed with salicylic wool. The patient convalesced well; his old headache had left him by the time he recovered from the effects of the chloroform. By the end of a month he could listen to anyone reading the paper. On July 12th, 1889, the patient was in good health. There had been no return of the headache or vomiting. He was deaf on the left side, but could hear enough with his right ear to enable him to converse with his friends; he was completely blind. There was no evidence of any further growth of the tumour.

Richard Neale, M.D.

437. *Binswanger on Psychic Disturbances of Standing and Gait.*—The following is the substance of a long article:—In 1888, P. Blocq, a disciple of Charcot, described peculiar derangements of standing and walking, illustrated by eleven cases, under the names "astasie" and "abasie," respectively (astasia and abasia—no standing, no going! In all the cases the vision was quite intact, also the muscular power, and co-ordination of movements in the lower limbs. Since the then, Grasset has reported a case (with hysteria in the male), and Souza-Leite, two cases. The author now describes several cases in detail. Case 1. Man aged 55, of somewhat nervous temperament. Fairly good health till 1884, when, one evening, after a large meal with much wine and the smoking of strong cigars, he felt weak, giddy, and anxious, as if he had suddenly lost the power of standing up. This feeling soon went, but in a few months recurred, and for a short time he could not stand or walk alone. Acoustic hypersensibility for the time. Was relieved by a glass of beer. His doctor suspected fatty heart, and sent him to Kissingen. The attack recurred in February, 1884, and again in March. He now lost all confidence in himself, could not stand or go alone; had muscæ volitantes, noises in the ears, and trembling on movement. It should have been said that he was happily married, and that he had had syphilis twenty years before. Treatment by K.I. was useless. To be in a theatre gave him a feeling of intense anguish; and at last he was only at ease when lying down. Retinæ at this time normal. A feeling as if wounded in the back of the head came on and persisted. In 1886 antisyphilitic treatment in Aachen; forty-eight infrictions, twelve injections, (K.I.) by mouth; no better. Bad winter; could not walk a quarter of an hour; palpitations; very excitable. In spring of 1887, Swedish gymnastics for four weeks useless, so also cold rubbings down, and warm baths. "In the woods, where the eye has a hold, I can get on better," he said about this time in Wiesbaden. Then four weeks in Thuringia, and six in Heningsdorf; but in autumn he attempted work and went on with it a few months. In 1888 was forced to control his business alone, but was very bad the next winter. In February, 1890, carefully examined—no abnormal physical signs detected, except that the visual fields were concentrically somewhat contracted. Not the slightest ataxia; strength good. All the reflexes and perceptions good. But he complained that every hard step gave him discomfort in the ears. Placed in the middle of the room, standing alone, the head trembled in a few moments, the glance was restless and showed anxiety; he rubbed the back of his head, and strode quickly to the nearest support. The same sort of trouble came on if he sat upright with the back unsupported, and he was only easy when he could lean his back against something. He says that if set to walk alone the feeling of distress begins in the back of the head and passes to the breast, accompanied by feelings of suspension of the power of thought; after this comes the idea that he cannot walk. Then he staggers and takes long, rapid strides towards some support. Often hears a "crack" in his head. Says his intelligence is reduced about a fourth. Sleep, bad; evil dreams, frequent pollutions. Listening and reading fatigue him more quickly than speaking and writing, but he cannot do these for long. All treatment having failed so far, a slight operation was made, viz., after incision into the scalp, the periosteum was shaved off the opening of the parietal emissary vein, which was encouraged to bleed well. This did no good, nor was its connection with an issue any use. A long residence in the Thuringian Forest did some good, and the patient has resumed the conduction of his business. Cases II. and III. are similar. In all three cases the symptoms were almost entirely objective, and disappeared when the recumbent position was assumed. In all, the symptoms set in suddenly; in all there was universal emotional excitability, and hypochondriasis. Two of the patients had syphilis many years previously, but showed no usual symptoms of it. These cases perfectly agree with some of Blocq's; some of his were far worse, and were not pure examples of the affection in question. In fact, Blocq made three categories out of his eleven cases, while only four of them were pure, in the author's opinion, the others showing various spinal troubles. Grasset's case is the fifth, but the two cases of Souza-Leite must be rejected, or "astasia and abasia" will have the same fate as Friedriech's "paramyoclonus multiplex," and have all sorts of diseases tacked on to them. If we separate all doubtful cases, *e.g.*, all cases at all ataxic, or with cramps, or spinal pains, &c., we find that the term "abasia and astasia" comprehends only a very small group. In the midst of the larger group of psycho-pathological affections, to which this small group belongs, stands "agoraphobia"—the dread of a wide place, never accompanied by giddiness, though the patient may use the term. Next comes "height-giddiness." Hypochondriacal "compulsive ideas" may also be ranked here, whether due to organic derangement of the locomotory apparatus "as in the French cases," or originating in the thoughts entirely, (L. Meyer's "intentional psychoses.") In "abasia and astasia" the psychic disturbance acts suddenly, as a kind of shock. But there is also an insidious development of the idea of inability to move, as when persons who have long laid in bed, and who can move their limbs quite well there, owing to some clumsy failures on first rising gradually acquire the conviction that they cannot move out of bed, (Naftel's "atremia.") In short, the term "abasia and astasia" is hardly required, the condition signified being only a minute portion of a wide branching psychosis.

E. J. Edwardes, M.D.

438. *Thomson on Functional Nervous Diseases.*—With the progress of knowledge and increased accuracy of scientific investigation, the tendency is to lesson the number of functional diseases. Some observers go the length of asserting that some day every disease will be referred to organic lesions. The writer differs from that conclusion, and maintains that there will always remain a margin of purely functional disorders. His paper, too, deals especially with the relations of nervous symptoms to gastro-intestinal derangements. He insists on the fact that the course of organic disease must, by its nature, be constant, whereas it is naural to expect intermittency in

functional disorders. Abnormal action on the part of a cell does not necessarily imply a pathological condition; as evidenced by the action of many drugs and poisons—such as strychnia, morphia, curare, ipecac, etc.—on the human system. Unless in toxic doses their effects are transient, resembling the manifestation of certain diseases. After elimination of the drug further action ceases, and the cells resume their normal physiological functions. It is possible that through some error of elimination, of assimilation (nutrition), or of metabolism, certain poisons are produced, which act on normal cells, and so produce functional diseases. Action of this kind constitutes an exacerbation, while remission occurs when the poison is eliminated, or otherwise got rid of. The action of many drugs, such as chloral and morphia, is profoundly affected by idiosyncrasy. In the same way an explanation may perhaps be found for the nervous phenomena caused by the circulation of some alkaloidal poison in the economy. Dr. Thomson argues that many of these poisons are probably absorbed from the intestinal canal, causing hysteria, migraine, epilepsy, and kindred ailments. He contends that better results may be obtained from the administration of brisk purgatives and aids to digestion than by the sedatives, hypnotics and anti-spasmodics of routine practice.

David Walsh.

Pathology.

RECENT PAPERS.

442. Neuberger, Dr. J. —On Calcareous Deposits n the Kidneys. (*Archiv. f. Exp. Path. a. Pharm.*, April, 1890.)

443. Ijevsky, Dr. Serghei P.—A Contribution to the Pathological Histology of theGanglion Nodosum Nervi Vagi with regard to Croupous Pneumonia and Chronic Nephritis. (*St. Petersburg Inaugural Dissertation*, 1889, No. 99, pp. 46, with 4 figs.)

444. Schmied, Dr. Heinrich K.—A Contribution to the Question on Ascending Inflammation of the Pneumogastric Nerve in Pulmonary Affections. (*St. Petersburg Inaugural Dissertation*, 1889, No. 58, p. 44.)

445. Cones, John A.—On Destruction of the Gall Bladder. (*Practitioner*, May 20, p. 378.)

446. Chipault, A.—On Papilloma of the Velum Palati. (*Bull. de la Soc. Anat.* de Paris, 1890, p. 153.)

447. Faure-Miller, Dr. R.—On Double Tubercular Salpingitis. (*Bull. de la Soc. Anat.* de Paris, 1890, p. 168.)

448. Patteson, R.G.—On the Pathology of Joint Bodies. (*Jour. of Anat. and Phys.*, Vol. xxiv., p. 360.)

449. Greenfield, W. S., M.D.—On a case of Malformation of the Heart. (*Journ. of Anat. and Phys.* Vol. xxiv., p. 423.)

450. Bonnecken, Dr. H. B.—On the Bacteria of Strangulated Herniæ. (*Virchow's Arch. Bd.* 120. S.7.)

451. Schuetz.—On the Histology of Lupus Erythematosus. (*Archiv. f. Derm. u. Syph*, Heft 1, 1890.)

452. Boinet and Borrel. — On the Existence and Interpretation of Giant Cells in Leprosy. (*Comptes r. de la Soc. de Bisl.; Annales de Derm. et de Syph.*, No. 4, 1890.)

Art. 442. *Neuberger on Calcareous Deposits in the Kidneys.*—Dr. J. Neuberger has further investigated the nature of calcareous deposits experimentally produced in the kidneys. His results may be thus stated:—1. Abundant calcareous deposits are found in the renal tubules after poisoning by corrosive sublimate, aloin, or bismuth sub-nitrate. They are of exactly the same kind in each case, are composed of calcium, carbonate, and phosphate, and are partly granular, partly crystalline. The granular portions are coloured red-brown by Grenacher's logwood process. 2. Comparatively inconsiderable deposits of similar character sometimes appear after administration of phosphorus, neutral potassic chromate, and many other substances having a toxic action on the renal tissue; also in consequence of some agencies at present unknown. 3. The deposits met with, after one or two hours' ligation of the renal artery, are in every respect identical with those caused by sublimate poisoning. Permanent ligation of the artery induces a very high degree of calcareous deposit, even the glomeruli becoming affected. 4. Poisoning by oxalic acid is characterised by very abundant deposits in the kidneys of calcium oxalate, which is easily distinguished from the deposits above mentioned by remaining unaffected by the logwood stain.

G. Dale, M.B.

443. *Ijevsky on Morbid Changes of the Ganglion Nodosum of the Vagus in Croupous Pneumonia and Chronic Nephritis.*—Dr. Serghei P. Ijevski, of St. Petersburg, has undertaken, under the guidance of Professor K. N. Vinogradoff, a histological inquiry into morbid lesions arising in the ganglion nodosum of the vagus in the course of croupous pneumonia and chronic nephritis. In all, 53 cases were examined, 25 of them being those of croupous pneumonia in all stages (in 18 men and seven women, aged from 12 to 60), 16 chronic nephritis (five men and 11 women, aged from 20 to 60), and 12 cases of chronic nephritis complicated with croupous pneumonia. The main outcome of the investigations may be summed up as follows:—I. *Croupous Pneumonia.* 1. Both the stroma and nerve cells of the ganglion invariably undergo more or less marked morbid changes, the former, however, being affected more intensely than the latter. 2. In early stages in complicated cases, the stroma is found to be considerably congested, and sometimes traversed with fairly profuse extravasations, its capillaries, arteries, and especially veins, being dilated and blocked up with red blood corpuscles and leucocytes. There is also always present infiltration with lymphoid elements, which show tendency to group together around the vessels, and to form characteristic concentric rows around nerve cells, the said elements frequently penetrating within the cellular capsule, to lodge partly between the latter and protoplasm, partly in the protoplasm itself. In the stage of grey hepatisation, the lymphoid cells are often found to have transformed into spindle-shaped ones, and to thus lead to increase of the interstitial connective tissue, and thickening of the nerve cells' capsules. 3. The nerve cells themselves undergo either opaque swelling or, less frequently, hyaline degeneration. In the former case, there are also observed enlargement and proliferation of the capsular endothelium; in the latter, the capsule similarly becomes hyaline. All the cellular changes attain their maximum intensity in the stage of gray hepatisation. II. *Chronic Nephritis.* 1. Both the stroma and nerve elements prove to be always affected, and that in a by far greater degree than in the case of pneumonia. 2.

The stroma shows large amounts of newly-formed connective tissue (fibres and spindle-shaped cells), which either is arranged along vessels, or forms concentrical layers around nerve cells, or replaces destroyed nerve fibres. 3. There are always found profound vascular changes, such as thickening of the venous and arterial walls, caused by hyperplasia of both the adventitia and endothelium of the intima, the lumen being frequently completely occluded. In other cases, the arteries undergo hyaline degeneration. 4. The protoplasm of nerve cells proves to be constantly affected by fatty, pigment, or hyaline degenerations, and to undergo vacuolisation. The cellular capsule is usually thickened, in consequence of multiplication of the endothelium and connective tissue stratum; in extreme cases the protoplasm disappearing tracelessly, and the nerve cell being replaced by concentrically-arranged connective tissue fibres. Degenerated nerve cells are, on an average, smaller in size in comparison with those in croupous pneumonia (28·4 by 16·8 micromill. against 42·4 by 38·6). 5. Nerve fibres are found to be similarly intensely changed. Their axis cylinders become granular, myeline partially disappears, the nerve fibre assuming a rosary-shaped appearance, and nuclei of Schwann's membrane undergo proliferation. In extreme cases, degenerated nerve fibres are ultimately replaced by fine bundles of connective tissue fibres, or by empty and collapsed Schwann's membranes, closely studded with multiplied nuclei. In conclusion, Dr. Ijevsky points out that such morbid alterations of the ganglion must necessarily manifest some influence on the clinical course of the diseases in question. He is yet unable, however, to specify in what exactly this influence might consist.

444. *Schmied on Morbid Changes in the Vagus in Croupous Pneumonia.*—Following the suggestion by Professor N. P. Ivanovsky, Dr. Heinrich K. Schmied, of St. Petersburg, has microscopically examined the pneumogastric nerves from 34 fatal cases of croupous pneumonia, referring to 19 men and 15 women, aged from 12 to 72. Of the number, in 18 the affection was limited to the right lung, in 11 to the left, while in five both of the lungs were affected. Nine cases were those of pneumonia pure and simple; four were complicated with chronic disease of the genital organs (endometritis, etc.); four with that of the heart; three with acute cardiac disease; one with enteric fever; nine with chronic affections of the kidneys, or liver, or stomach, or spleen, or brain; three with syphilis; and one with arterio-sclerosis. Of 34 cases, in seven the vagi (both the trunks and branches to the bronchial plexuses) were found to be normal; but in the remaining 27 either one or both of the vagi proved to be distinctly diseased (of five cases of double pneumonia, in four, both—in one, but one—of the vagi were altered; of one-sided cases, in one both of the nerves—in the remaining, only one—that corresponding to the inflamed lung—were changed). The morbid lesions varied in their intensity and extent, but were invariably identical as far as their pathological nature was concerned. They consisted in (*a*) congestion of the nerve, with considerable dilatation and tortuosity of the nerve vessels; (*b*) infiltration of the interstitial connective tissue (the septa between secondary nerve bundles, etc.) with lymphoid elements; (*c*) perivascular accummulation of leucocytes; (*d*) proliferation of nuclei in Schwann's membrane. The proper nerve substance, myeline and axis cylinder, remained always intact. The lesions were invariably most pronounced in the branches of the bronchial plexus, the ganglia of which also presented such morbid alterations as infiltration of the stroma with leucocytes, dilatation of vessels, endarteritis, and opacity, vacuolisation and shrinking of the ganglionic nerve cells. In every one of the cases, the intensity of the morbid process was found to gradually lessen in an upward or centripetal direction, the changes disappearing altogether at this or that level. Analysing his results, Dr. Schmied comes to the conclusion that—1. Croupous pneumonia is, as a rule, accompanied by ascending interstitial neuritis of the vagus. 2. The morbid process is intimately connected with the pulmonary inflammation, since (*a*) it is present in complicated and single cases alike; (*b*) in cases of one-sided pneumonia, the vagus corresponding to a diseased lung proves to be invariably affected, while that corresponding to a sound lung remains intact; (*c*) neuritis is always most pronounced in such sections of the nerve which are situated most closely to the area of hepatisation, and gradually disappears in more remote portions of the vagus. 3. It is highly probable that pneumogastric neuritis constitutes a primary cause of such symptoms of croupous pneumonia, as vomiting, dysphagia, and the absence of parallelism between the pulse and respiration, the frequency of the latter being commonly equal to, or even surpassing, that of the pulse.

Valerius Idelson, M.D.

445. *Cones on Destruction of the Gall Bladder.*—Mr. Cones relates the case of a man, aged 53, who, when seen in March, 1887, was suffering from catarrhal jaundice with great epigastric discomfort, but apparently had never suffered from biliary colic. He noticed that his appetite had lately increased, especially as regards a craving for indigestible foods. When again seen in October, 1888, he was still suffering from epigastric pain which was now constant and severe. In spite of all care and treatment the patient gradually lost ground and died, November, 1889. On *post-mortem* examination a tumour was found occupying the place of the gall bladder, the coats of which could not be traced, nor could any concretions be found. The tumour consisted of ordinary fibrous tissue. The special points of interest in the case are the complete destruction of the gall bladder: the comparatively slight disturbance to the functions of the liver, and the long duration (five years) of the symptoms. Evidently the bile had passed directly into the intestines, and this appears to have caused the increased appetite for irritating articles of food, a symptom Mr. Cones explains by the physiological irritation caused by a constant flow of bile into the intestines.

Richard Neale, M.D.

446. *Chipault on Papilloma of the Velum Palati.*—The tumour, which was removed from a girl of the age of 12 years, had its situation on the free border of the soft palate at the base of and on the right side of the uvula. It was pedunculated and of the size of a cherry-stone. At its base was a smaller sessile tumour. The author gives a list of the comparatively small number of cases recorded up to the present time. The tumour in the present case was removed without any trouble, and proved, on microscopic examination, to be papillomatous in its nature.

447. *Faure-Miller, R., on Double Tubercular Salpingitis.*—The patient from whom the specimens were obtained was aged 29 years. The *post-mortem* examination showed in the lungs tubercles in all stages of development, the peritoneum and some of the abdominal organs being similarly affected. On examining the pelvis there was found on the left of the

rectum a tumour of the size of an apple; adhering closely to the uterus, it extended from that organ to the wall of the pelvis. A section through this tumour showed that it was the dilated Fallopian tube containing caseous pus, which on microscopic examination was found to have tubercle bacilli in it. The interior of the uterus also presented tubercular granulations. The ovary of the right side was healthy; its tube was not much increased in size, but had at its obliterated ovarian extremity a small tumour of the size of a nut. This, on further inspection, proved to be the trumpet-shaped extremity filled with tubercular granulations, some of which were commencing to caseate. The author points to this as an earlier stage of the condition on the left side. He notes also that the lesions of the uterus and its appendages were of earlier date than those of the pelvic peritoneum and abdominal organs.

448. *Patteson on the Pathology of Joint Bodies.*—(1) In the majority of cases, loose bodies of mixed cartilaginous and bony nature are wandering osteophytes, and are evidence of a rheumatic arthritis, either manifest or latent. (2) This form of chronic rheumatic arthritis is insidious and latent in many instances, occurs in young persons as well as those more advanced in years, is often limited to a single joint, and is chiefly manifested in "lipping" of the margins of the articular cartilages, and in the formation of ecchondroses and osteophytes, which while attached cause no symptoms. (3) These bodies, after liberation in the joint, may, and do often, undergo considerable increase in size, living by imbibition, and their nutrition being derived from the synovial fluid. This fact points to the necessity of their early removal by operative interference.

449. *Greenfield on a Case of Malformation of the Heart.*—The patient from whom the specimen was obtained was a railway porter, aged 53, who had complained of shortness of breath for six weeks prior to admission to hospital. At the *post-mortem* examination, the two auricles were found to communicate by an opening of nearly circular shape, and about 1½ inches in diameter. The upper and a considerable part of the interior portions of this opening were formed simply by the wall of the auricle, at the lower and more posterior part it was bounded by a septum, the upper edge of which was curved and thick. No ridge could be discovered indicating where the septum should be attached on the upper wall of the auricles. About half-an-inch below the upper edge of the septum was a patent foramen ovale. Between the two openings was a firm, smooth, muscular bundle, wide and pyramidal in front and becoming narrower and sharper behind. On the aspect of the posterior half of the septum towards the right auricle was an extensive irregular cribriform membrane, only attached here and there to the muscular wall. It extended from the entrance of the inferior vena cava to the aperture of the foramen ovale. Part of it might represent the Eustachian valve, but from its relations this could hardly account for the whole. The foramen ovale had the usual oblique direction and funnel shape, but owing to the thickness of the muscular bundle under which it passed, it was of unusual length. The aortic valve consisted of two cusps, of nearly equal size, anterior and posterior, the former being formed by the fusion of two. The aortic orifice was greatly narrowed, the artery itself being dilated above the valves and narrowed immediately beyond the opening of the ductus arteriosus, again expanding beyond to the normal size. The pulmonary orifice and artery were greatly dilated, and the coats of the latter much thickened, so as to resemble those of the aorta.

450. *Bonnecken on the bacteria of Strangulated Herniæ.*—Herniæ strangulated in hernial fluid, present, even in an early stage of incarceration and long before gangrene of the intestinal wall commences, micro-organisms. (1) These originate in the interior of the intestine and both as bacilli and cocci make their way through the intestinal wall. (2) Death in an animal in which a strangulated hernia has been artificially produced, is consequent upon peritoneal sepsis, usually without purulent peritonitis, though this may occur. (3) In herniotomy, when the sac is opened, its interior as well as the loop of intestine should be strictly antisepticised.

BERTRAM C. A. WINDLE, M.A., M.D.

451. *Schuetz on the Histology of Lupus Erythematosus.*—The author was unable to find any evidence of micro-organisms in the tissue. From the examinations of the sections made from tissue which had been hardened, it appeared that the first histological changes take place in the blood vessels of the papillary layer, but that the glandular structures of the skin, particularly the sebaceous glands, take an active part in the progress of the disease, as the hypersecretion gave rise to the formation of exudation cells and lupoid infiltration. Infiltration around the openings of the sebaceous glands take place early, which is in concordance with the clinical fact that lupus erythematosus may develop out of local seborrhœa and acne rosacea.

452. *Boinet and Borrel on the Existence and Interpretation of Giant Cells in Leprosy.*—Boinet and Borrel have stated that giant cells exist in lepromes. Several authors have denied this statement. These cells, which are relatively enormous, do not present defined membranes. The nuclei, which may number twenty to twenty-five, have somewhat the appearance of the nuclei of epithelial tumours. The cells do not appear to possess phagocytic properties, for they do not contain bacilli except when the neighbouring tissue is literally infiltrated with them, and when they contain bacilli they do not present the forms of bacillary destruction which are described. The cells seem rather to be elements of degeneration, and to present all stages of that condition.

G. THIN, M.D.

Bacteriology.

RECENT PAPERS.

443. FOKKER, A. P.—On the Germicidal Qualities of Milk. (*Forschr. der Medecin*, vol. viii., p. 7.)

444. GASPERINA, GUSTAVO.—On Butter as a means of the Transmission of Tuberculosis. (Abstracted in *Centralb. f. Bakter.*, vol. vii., No. 20, pp. 641-42, r. f. *Giornale della R. Soc. d'Igiene*, Milano, 1890.)

445. KERRY, RICHARD.—On the Decomposition of Egg-albumin by the Bacillus of Malignant Œdema. (*Transactions of the Imperial Academy of Science; Vienna Monthly Report of Chemistry*, vol. x., 1889, No. 10; *Centralb. f. Bakter.*, vol. vii., No. 20.)

443. *Fokker on the Germicidal Qualities of Milk.*—In connection with the work of Nuttall, Buchner, and Lubarsch, Fokker communicates his observations upon the property of destroying bacteria which milk possesses. He found that fresh goats' milk which was received asreptically into sterile glasses,

when boiled for a few minutes, and then inoculated with the smallest trace of a pure culture of lactic acid germs, curdled within twenty-four hours, whilst unboiled milk did so only after two, and sometimes after three or four, days. By plate cultures, and by counting the growths in them, he came to the conclusion that with milk, just as is the case with blood, there takes place first of all a diminution of its contained bacteria, and then an increase. A heating of the milk for a short time does not always destroy its germicidal action.

444. *Gasperina on Butter as a means of Transmission of Tuberculosis.*—Dr. Gustavo Gasperina has made numerous and interesting experiments upon the preservation of tubercular germs in butter. The author mixed 10 c.cm. of water, in which a full culture of Koch's tubercle bacilli had been rubbed up with 5,000 c.cm. of milk. After twenty-four hours butter was obtained from it. The presence of the bacilli was proved in the butter, as well as in the milk and cream, The butter was preserved in a closed vessel and used at different periods as material for the inoculation of guinea-pigs. The results of the first series of experiments showed that even after one hundred and twenty days from the date of infection of the milk the butter retains its poisonous properties. In another even more interesting series of experiments, the author employed broken-down caseous material, obtained from a large tubercular swelling in a rabbit as a means of infecting milk with a pure culture of tubercle bacilli. The reason of this is explained by the fact that, notwithstanding repeated and careful researches, it is scarcely ever possible to show the presence of the specific bacilli in milk from tuberculous cows, yet animals inoculated with such milk die tuberculous. This must be ascribed to the quick conversion or disappearance of the germs rather than to a difficulty of tracing them. Koch's bacilli themselves could not be found in the tubercular pus, nor in the infected milk or butter; and only in the pus could the little round bodies which come from Koch's bacilli be demonstrated, and which can be stained by the method of Ehrlich and Ziehl. From the second series of experiments it was proved that the butter retained its poisonous properties after the infection of the milk. The butter in the first series of experiments remained good throughout, but in the second series it was good only for a little time, and soon afterwards went putrid. The result of these experiments seems to indicate that there is danger in using butter from infected milk, which danger can only be overcome by the establishment of institutions (such as exist in England and elsewhere) where the purity of the milk is thoroughly checked by competent and careful persons.

445. *Kerry on the Decomposition of Egg-albumin by the Bacillus of Malignant Œdema.*—In his investigations Kerry found the well-known products of the decomposition of egg-albumin, such as fatty acids, leucin, hydro-paracamaric acid, no indol or skatol, but an evil-smelling oil of the composition of $C_8 H_{16} O_4$, which, in its reaction and behaviour under oxidation, seems to belong to the series of ketones or aldehydes. The oil is insoluble in water, alkalis, or acids; easily soluble in ether, benzol, bisulphide of carbon; boils between 165°-171°C.; is lighter than water, optically active; giving as its chief oxidation product valerianic acid. The author also undertook the investigation of the gaseous products of the decomposition, and found that, with the exception of carbonic acid, hydrogen was the chief. In the beginning of the fermentation pit gas (? CH_4) was also formed. The question of the existence of free nitrogen the author is yet unable to answer. He promises fresh investigations upon the subject.

VINCENT D. HARRIS, M.D.

Dermatology.

RECENT PAPERS.

448. SWAIN, J. L.—On Vinegar in Urticaria. (*British Med. Journ.*, May, 1890, p. 1056.)

449. FOX, T. COLCOTT, M.B. Lond., M.R.C.P. —On Urticaria in Infancy and Childhood. (*The British Journ. of Dermatology*, 1890, p. 134.)

450. SALVAGE, DR., J. V.—On Acute Pemphigus in Infant Infecting the Mother. (*Lancet*, April, 1890, p. 850.)

451. HARTZELL, M. B.—On Recurrent Herpes Zoster. (*Amer. Jour. Med. Science*, April, 1890.)

452. BROOKE, H. G.—On a Preliminary Treatment of Lupus Vulgaris. (*Brit. Journ. Dermatology*, May, 1890.)

453. JOSEPH, MAX.—On Acute Circumscribed Œdema of the Skin. (*Journ. of Cutan. and Genito-Urin. Dis.*, vol. viii., No. 96.)

454. PICK, PROF.—On the Treatment of Eczema. (*Centralb. f. die gesammete Therapie.*, Jan., 1890.)

455. PRINGLE, J. J.—On a case of Congenital Adenoma Sebaceum (*Journ. fur Derm.*, vol. ii. No. 1.)

456. STELLWAGON.—On Dermatitis Herpetiformis. (*Journ. of Cutaneous Diseases and Genito-Urinary Diseases*, 1890.)

457. ROCH on the Treatment of Erysipelas. (*Wiener Klin Wochen*, No. 27.)

458. KELLOCK, J. D.—On Carbolic Acid Gangrene. (*Philadelphia Med. News*, May 10.)

ART. 448. *Swain on Vinegar and Urticaria.*—Mr. Swain, after trying many remedies in a severe case of urticaria, found a vinegar lotion give almost instant relief, and subsequently other cases have been equally benefited. One of water to two parts of vinegar is the strength most suitable

449. *Fox on Urticaria in Infancy and Childhood.* —In this interesting communication, Dr. Fox contends that the lichen urticatus of Bateman is a true urticaria, and that urticaria is one of the most common affections of young life; the wheals having their centres occupied by an inflammatory lesion, which persists when the evanescent wheal subsides; that the inflammatory lesion is generally a papule, and hence the term lichen urticatus or urticaria papulosa, sometimes a vesicle, at others a pustule; that the conditions described as L. urticatus and ancilla-prurigo, infantile prurigo following measles and vaccination, and Crocker's popular and vesicular and pustular vaccination rashes are only phases of one and the same disease, viz., the urticaria of infancy and childhood. It is impossible to do justice to the paper without fuller extracts than space will allow, but a careful study of the original will be well repaid by the acquisition of a fund of knowledge.

450. *Salvage on Acute Pemphigus in Infant Infecting the Mother.*—An infant, three days after birth, had an attack of acute pemphigus, the palms and soles of feet being the only parts free. Four days before the bullæ ceased to appear, several formed on the breasts and forearms of the mother, who always wore short

sleeves. These bullæ exactly corresponded in form to those on the child, and they ceased to appear after the infant was cured. There was no suspicion of syphilis.

RICHARD NEALE, M.D.

451. *Hartzell on Recurrent Herpes Zoster.*—A railway inspector, aged 45, in November, 1884, suffered severe neuralgic pains for two days in the inner and upper part of right thigh. Herpes then appeared in the same sites. Three weeks afterwards the same phenomena arose over the sacrum and back of thigh. For over a year similar attacks occurred at nearly equal intervals, and sometimes the neuralgia and neurotic herpes were bilateral. After five years' freedom the disease recently returned. A compound fracture of the femur sustained some months before the first seizure was regarded as the exciting cause. Eleven cases, recorded by various observers, are analyzed, and in five surgical injury had previously occurred. For treatment iron, arsenic, and cod-liver oil were relied on. [In 1885 the reporter met with a delicate boy, aged 13, who had herpes along the course of the middle cutaneous branch of the anterior crural nerve on two occasions, the interval being four months. The neuralgic pains were slight. No cause was discoverable.]

452. *Brooke on a Preliminary Treatment of Lupus Vulgaris.*—The following application has been found extensively useful:—Hydrarg-oleatis, ʒj; acidi salicyl., gr. 10-15; icthyol., ♏ 15; ol. lavand—q. s. It is best applied by inunction, say for twenty minutes in the evening and ten in the morning. It reduces the field in which operations are needed, is painless, and usually involves no suspension of work. The proportion of the ingredients must vary with the sensitiveness of individual skins. The ointment may be fixed to the skin by dusting with starch, or adding that powder and zinc oxide to a second portion of the ointment. In the case of the hands gloves should be worn.

E. D. MAPOTHER.

453. *Joseph on Acute Circumscribed Œdema of the Skin.*—In a paper read before the Dermatological Congress at Prague, and published in the *Berliner Klinische Wochenschrift*, Nos. 4, 5, 1890, Max Joseph reviews the literature of the subject of acute circumscribed œdema of the skin, and gives three cases in support of his belief that it is an independent disease attended with certain complications. The œdematous spots appear for the most part acutely in several places at the same time, rapidly reach their greatest development, and disappear quickly after a longer or shorter duration. Sudden cooling of the skin, catching cold, over-exertion, etc., he mentions as conditions favouring the development of the disease. The author described the case of a boy (in whom the disease had existed two and a half years) which was complicated with paroxysmal hæmoglobinuria. Exposure to cold or windy weather caused the appearance of lesions, varying in size from a pea to a plum, on the hands and face. Urticaria factitia could be produced on the body. The patient has had four typical attacks of paroxysmal hæmoglobinuria, the general symptoms being slight. The œdema did not result from the local blood change, but, contrariwise, following the œdema, hæmoglobinæmia and then hæmoglobinuria occurred. Signs of Basedow's disease were exhibited in the second case. The œdema had first appeared six years previously, when attacks of urticaria were frequent. While the urticaria affected the whole body the œdema was limited to the hands, feet, and lip, once appearing on the tongue. An urticaria factitia could also be produced on this patient. The œdema in the third case occurred usually on the face, lip, chin, and upper eyelid. The lesions appeared suddenly and disappeared in from one to twenty-four hours. There were sharply-circumscribed swellings on the arms, hands, and feet, the consistence of which was elastic. The temperature was somewhat elevated. The patient stated that the first attack was attended with rheumatic pains in the right knee and foot. Two groups of the affection are distinguished, one in which swelling of the skin is complicated with that of mucous membranes, and one in which it occurs isolated. The author advises that patients who are sensitive to cold and who suffer from attacks when exposed should as much as possible avoid exposure. Patients liable to be affected after alcohol should guard against its use. In some cases relief is obtained by rest, foot-baths, relief of constipation, etc. Atropine at times has appeared to have a good effect. Küssner believes he has found benefit from infusion of secale cornutum, and Graham from Turkish baths. Matas (*New Orleans Medical Journal*, October, 1887) has alone reported complete cure—from large doses of quinine.

454. *Pick on the Treatment of Eczema.*—At the meeting of the German Dermatological Congress held at Prague last year, Professor Pick read a paper embodying his views regarding the treatment of eczema. In the development of the disease a clear line of distinction should be drawn between the proper eczematous process and the septic complication called by Hebra eczema impetiginosum. The indications to be fulfilled by treatment are to protect the skin from external irritation and to prevent local infection. The following formula, which has been thoroughly tested by Pick, fulfils these indications, besides being quite unirritating:—℞ gelatin. albae, 30·0; aquae dest, q.s. Macerate for several hours, then liquefy over a water-bath, and evaporate to 75·0 by weight. Add: glycerini, 25·0; hydrarg. chlor. corros., 0·05. The preparation should be applied with a brush, having beforehand been rendered liquid over a water-bath. It is indicated only in the dry stage of the disease, as moisture prevents its adhering to the skin. Professor Pick has found salicylic acid and soap plaster useful. The formula is as follows:—℞ emplastr. saponat. liquef., 100·0; acid. salicylic, 5·0. These ingredients are mixed and spread on linen or cotton cloth. The addition of 25 per cent. of olive oil to the above formula renders the plaster more adhesive. The salicylic acid may be increased or diminished in amount according as the skin is infiltrated to a greater or lesser extent. The plaster is cut into strips and applied to the skin, where it may remain for some days undisturbed. Shortly after the plaster has been applied the patient becomes conscious of a burning pain, which, however, does not last long. Should the amount of moisture be great the first dressing may be removed on the third or fourth day, the further dressings being allowed to remain on the affected part for eight days or longer. The gelatin application may be renewed after the moist stage has been passed.

G. THIN, M.D.

455. *Pringle on a Case of Congenital Adenoma Sebaceum.*—In this excellent paper on congenital adenoma sebaceum, Dr. Pringle formulates the following conclusions:—(1) A number of cases may be grouped together under the name of adenoma sebaceum, first proposed by Dr. Balger. (2) In all, the essential element is a hypertrophy of sebaceous glands. (3) The seat of election of the disease is the

face, and especially those parts of it where the sebaceous glands are normally present in greatest abundance. (4) The condition is always either congenital or observed in early life. (5) It is frequently aggravated at the commencement of puberty. (6) It may be associated with other sebaceous disorders prone to develope at that period, but such appearance is by no means constant or essential. (7) There is always a certain amount of concomitant vascular hypertrophy or telangiectasis, but varies within wide limits. (8) The subjects of disease appear to be generally intellectually below par. (9) Apparently females are more frequently affected than males. (10) Disease is absolutely being unattended by subjective symptoms, unless complicated by other affections. (11) Its tendency is to increase up to and remain stationary after puberty, or to disappear slowly, leaving shallow, atrophic scars, which ultimately fill up. (12) It can be removed by operative procedures, but may afterwards recur in face.

456. *Stellwagon on Dermatitis Herpetiformis.*—In three cases reported as under treatment, there was in common an extraordinary chronicity and rebelliousness to treatment, variable nature and herpetic character of eruption, absence of any predisposition to atrophy, ulcerate, or scar; intense pruritus was present. Case 1.—Lasted from 1881 to 1886; eruption being vesiculopapular and scattered generally over body. Saline laxatives and Fowler's solution produced ultimate improvement. Case 2.—Two years, surface being covered with bullæ, some as large as a hen's egg. Arsenic, quinine, cod-liver oil, and phosphorus did no good. Case 3.—Eruption consisted of ordinary herpetic vesicles, and had lasted about twelve months; itching intense. Arsenic caused improvement.

457. *Roch on the Treatment of Erysipelas.*—The following ointment is used:—Creoline, ʒi; iodoform, ʒiss; Lanolin, ʒx. Is applied with a brush over affected part, extending for a distance of two or three inches over healthy skin.

458. Unna's Chrysarobin Ointment for Psoriasis. (*Nunatshefte für praktische Dermatol.*, Band x., I).—℞. Chrysarobini, grs. 40; acidi salicylici, grs. 16; ichthyol, grs. 40; vaselini flava, ℥i.s.s., Fiat Ung.

Morgan Dockrell, M.A., M.D.

459. *Kellock on Carbolic Acid Gangrene.*—Two cases are reported in which the application of the acid to wounds of the end of the finger caused gangrene of the entire part in about two days. The result appears to have been brought about by contraction of the capillaries rather than by chemical action.

Laryngology and Otology.

RECENT PAPERS.

453. Ingals, E. Fletcher.—On the Treatment of Cystic Goitre by Electrolysis. (*Journal of the American Med. Assoc.*, Feb. 15, 1890.)

454. Knight, Chas. H.—Note on the Galvano-cautery in the Treatment of Hypertrophied Tonsils, *New York Med. Jour.*, Oct. 12, 1890.)

Art. 453. *Ingals on the Treatment of Cystic Goitre by Electrolysis.*—Dr. Fletcher Ingals reports two cases in which this method was successful. In the first case there was a cyst in the right lobe, from which on two or three occasions about an ounce of dark thin blood or bloody serum was removed. About one-third of the tumour was solid. An electrolysis needle being introduced into the sac, and the opposite lobe applied over the tumour, a current from six to ten Leclanché cells was passed for ten minutes. The operation was repeated three or four times. The cystic portion was entirely cured and remained so three years afterwards. In case 2, there was a cyst in the right lobe containing about three ounces of thin, dark blood. Five injections of carbolic acid (from 30 to 95 per cent. solut. in glycerine) were made with little or no effect. The current from four diamond-carbon cells was then applied for twenty minutes by means of two platinum needles inserted into the cyst. Two similar applications subsequently caused the cyst to disappear and there was no return a month later.

454. *Knight on the Treatment of Hypertrophied, Tonsils by means of the Galvano-cautery.*—Dr. Chas. H. Knight on the whole confirms the conclusions he expressed two years ago that, "the galvano-cautery should be reserved for a comparatively small proportion of cases, including those in which hæmorrhagic diathesis is present or suspected, those in which vascular anomalies may be recognised, those where anatomical conditions prevent a sufficiently complete excision of the organ, and those where the use of the knife is positively declined." In regard to children he considers it next to impossible to persuade them when under ten years of age to submit to galvano-practice often enough and to a degree sufficient to accomplish much, and the use of the cautery loop is in them out of the question, except under general anœsthesia. The author has tested five cases by abscising one tonsil with the guillotine, the other with the galvano-cautery loop. He considers that, "the pain caused by the cautery loop is not so much greater as to constitute a valid objection." For the purpose of tacking the galvanic loop round and behind the tonsil and holding it in position until the wire can be tightened, he uses a little two-pronged instrument made of copper. He acknowledges, however, that "in many instances, owing to the shape of the tonsil, the adhesion of a pillar or the intolerance of the patient, it is very difficult to include more than half of the tonsil. These difficulties may be, in fact, overcome by preliminary training of the patient and by thoroughly releasing an adherent pillar." The author's zeal for this method of treatment is tempered by two considerations: firstly, burning is more disagreeable to most people than cutting; secondly, the prevalent dread of hæmorrhage after excision is not overrated by clinical experience.

E. Cresswell Baker, M.B.

Diseases of Children.

RECENT PAPERS.

454. Swaney, Dr. A. J.—On the Treatment of Incontinence of Urine in Children. (*New York Medical Record*, May 3, 1890.)

Art. 454. *Swaney on the Treatment of Incontinence of Urine in Children.*—When due to excessive acidity of urine, the author gives full doses of acetate of potash until the urine is neutralised. When due to over-irritability of the muscular coats of the bladder, tincture of belladonna should be given in five-drop doses three times daily, increasing the dose by single drops until there is dryness of the throat and flushing of the skin. When due to weakness of the sphincter, ergot in full doses is indicated. A good effect follows the injection of five or six drops of fluid extract of ergot into the connective tissue of the ischio-recta fossa. In most cases tonics are indicated, the best results in the author's practice being obtained from the syrup of iodide of iron and strychnine. If due to local conditions, such as adhesions between the prepuce and glans penis or the presence of calculi, these must receive surgical attention.

George Brown.

Toxicology & Medical Jurisprudence.

RECENT PAPERS.

456. Brantigain and Nowalk, Drs.—On the Toxic Effects of Balsam of Peru. (*Centralb. f. Klin. Med.*, 7, 1890.)

457. Giovanni.—On a Rash following Administration of Sodium Iodide. (*Lo Sperimentale*, Sept. 1889; *Annales de Derm. et de Syph.*, No. 4, 1890.)

458. An Exanthem from the Use of Rhubarb. (*New York Med. Jour.*, Dec. 14, 1889.)

459. Armstrong, Dr. S. T.—On Poisoning by Antifebrin. (*Therapeutical Gazette.*)

Art. 456.—*Bruntigain and Nowalk on the Toxic Effects of Balsam of Peru.*—It is stated by the above that the detrimental effects on the kidneys of Balsam of Peru is due to adulteration with essential oils. Of a series of twenty-two patients who received large doses of the drug, not one developed the slightest symptom of kidney mischief.

Morgan Dockrell, M.A., M.D.

457. *Giovanni on a Rash following Administration of Sodium Iodide.*—Giovanni records an observation of subcutaneous nodosities, occupying the limbs and trunk, similar to those observed by Ricord, Pellizzari, and Talamon, after the administration of iodide of potassium. The eruption appeared after the employment of sodium iodide, which is generally considered less injurious, in doses of five grammes a day.

G. Thin, M.D.

458. *An Exanthem from the Use of Rhubarb.*—A singular case is recorded where, after a mixture containing ordinary rhubarb, a sailor, aged 64 years, was attacked by an eruption of papules and nodules over the cheeks and hands. The papules and nodules rested on infiltrated reddened bases, became pustular, and covered with a crust which, on removal, exposed a bleeding ulcerous surface. After discontinuing the rhubarb mixture for several weeks, the skin became sound, although the stains remained. To verify the diagnosis a dose of rhubarb was given, and immediately the exanthem returned. When again recovered, a dose of rhubarb was given inadvertently with a similar result. Richard Neale, M.D.

459. *Armstrong on Poisoning by Antifebrin.*—Only a very few cases of poisoning by antifebrin have so far been recorded, although it is generally recognised that ill effects may not improbably follow the administration of the drug in excessive doses. Considerable interest, therefore, attaches to a case of this description, concerning which notes are communicated to the *Therapeutical Gazette* by Dr. S. T. Armstrong, of the United States Marine Hospital Service. The patient was a healthy young seaman, 28 years old, who had undergone extirpation of hypertrophied inguinal gland, of syphilitic origin. For relief of pain he was given antefebrin in fifteen grain doses, eight powders having been dispensed, with instructions that one should be taken every half hour till pain was controlled. The idea of the prescriber was that one or two powders would thus be taken, when relief would follow; and his object in ordering eight at once was that the administration should be repeated on subsequent days, if needed: but Dr. Armstrong himself admits that the prescription was carelessly worded. At any rate the nurse in charge of the case supplied a free reading to the directions, and notwithstanding that no benefit followed she faithfully observed the directions, and gave one powder each half hour till all were exhausted. The patient was now in a state of general collapse, skin cold and blue, heart acting rapidly, muscular control almost lost, and unconsciousness present; nausea and vomiting were also observed. Treatment by hot bottles and internal administration of whisky and milk punch was continued for thirty-six hours, by which time the condition of the patient had so far improved that he thenceforward recovered well. Chas. H. Wade.

Syphilography.

RECENT PAPERS.

460. Balzer.—On Secondary Syphilides of the Vagina. (*Annales de Dermatologie et de Syphiligraphie*, No. 1, 1890.)

461. Barthélemy.—On Latent Conceptional Syphilis. (*Ibid.*)

462. Crutl.—On a new Preparation of Mercury for subcutaneous Injection. (*Ibid.*)

463. Ducrey.—Experimental Researches on the Nature of the Contagious Principle of Soft Chancre. (*Ibid.*)

464. Landouzy.—On Cases of Syphilitic Contagion during the Tertiary Period. (*Ibid.*)

465. Le Dentu.—On the Treatment of Ano-rectal Syphiloma by the Formation of a Temporary Artificial Anus. (*Ibid.*)

466. Maieff.—On the Pigmentary Syphilide. (*Ibid.*)

467. Portalier.—On the Relapse, *in situ*, of certain Syphilitic Lesions. (*Ibid.*)

468. Lydston.—On Tropho-Neurosis as a factor in the Phenomena of Syphilis, Part I. (*Philadelphia Medical and Surgical Reporter*, April 19th.)

Art. 460. *Balzer on Secondary Syphilides of the Vagina.*—Syphilis in this situation are only to be observed by careful examination with the speculum. The ampulla is their most usual seat, but they may also occur in the middle portion of the canal. The papular form is most common, either alone or in conjunction with papules of the cervix uteri. The erosive form of syphilide is also found in the ampulla, appearing as maculæ or striæ, with a reddish or whitish surface. When there are plaques on the cervix the vaginal lesions sometimes develop in immediate contact with them, especially in cases of anteversion. Papular or papulo-erosive syphilides are easily recognised. They are only likely to be confounded with flat vegetations or papular soft chancres of the vagina, but in these cases there are usually similar lesions of the vulva which help the diagnosis. In the middle portion of the vagina, syphilides are rarer than in the ampulla; they sometimes appear as plaques, with fissures or rhagades resembling those observed in the anal region.

461. *Barthélemy on Latent Conceptional Syphilis.*—This form of syphilis, in women infected by the fœtus, is less rare than might be believed *a priori.* The author has observed three illustrative cases; the last of which ended in the development of a manifest gumma, before which no symptoms had been observed in spite of attentive surveillance. At the beginning of cases of this kind nothing is noticed except lassitude, emaciation without obvious cause, and alopecia without lesion of the scalp. M. Besnier has recently insisted that post-puerperal alopecia should be studied from this point of view. Later on, nervous troubles, cephalalgia, periarthritis and osteocopic pains may appear. In ordinary acquired as well as in inherited syphilis the disease may also be latent almost without any skin manifestations, but this, according to the author, is much more frequent in the conceptional form, doubtless owing to the mode in which contamination takes place, namely, through the utero-placental veins.

462. *Cruyl on a new Preparation of Mercury for subcutaneous Injection.*—Corrosive sublimate may be dissolved in olive oil simply by the aid of heat, but complete solution is only obtained by frequent shaking of the mixture. The following is an easier method: the required quantity of sublimate, one gramme for example, is dissolved in ether and this etherial solution is added to 100 grammes or more of olive oil. The mixture is then shaken and heated in a water-bath until the ether has evaporated. By this means a perfectly limpid liquid is obtained. If any solid particles remain suspended they should be separated by filtering through paper. The author states that ten or twelve injections of this solution (dose not mentioned) are necessary for cure, and that no local or general inconvenience is ever caused.

463. *Ducrey on the Nature of the Contagious Principle of Soft Chancre.*—M. Ducrey, of Naples, does not believe that the soft chancre can be produced by the inoculation of ordinary pus. Further, his experiments with chancrous pus have convinced him that the ordinary methods of isolation in the nutritive media of artificial culture give no satisfactory result. He states, however, that he has succeeded in isolating the pathogenic micro-organism of soft chancre on a soil of natural culture—namely, the human skin. This organism is a bacterium 148μ long and 0·50μ broad, with rounded ends, and most frequently notched at the side, though this notch is sometimes ill marked, or even absent, in which case the micro-organism appears as a short and large bacillus. It is found abundantly in some preparations, but not at all in others. With the pus of buboes, no positive results were obtained either by artificial culture or by the inoculation of animals. This pus contains no kind of schizomycete visible by means of the microscope; and when it is inoculated on the human skin, it either remains without action of any kind, or gives rise to a false pustule; if injected beneath the skin it may cause an abcess. The author sums up his views as follows:—1. The virus of the soft chancre is due to an animate and specific element. 2. This virus has not yet been cultivated because, reduced in man to a state of purity, it is proved that its equivalent is a micro-organism which does not develop in the ordinary media of artificial culture. 3. All the micro-organisms hitherto described as factors of the soft chancre, and easily capable of cultivation, ought to be considered as having nothing to do with the chancrous process. 4. There exists but one form of bubo, or bubonule, in connection with the soft chancre, namely, the simple or inflammatory form. The chancrous bubo is merely the result of accidental inoculation after the bubo has been incised. 5. Bubo may be considered to be the result of reaction of the tissues against the peculiar products of the vital activity of the micro-organisms of chancre. In the discussion on this paper, M. Fournier referred to the denial by M. Ducrey of the existence of the chancrous bubo. M. Straus at one time was of the same opinion. M. Fournier himself had formerly made experiments on this subject. In those experiments the bubo was first isolated and then opened, and the pus was then inoculated, the strictest antiseptic precautions being observed throughout. In a certain number of his cases, M. Fournier had thus obtained the typical pustule and ulcer of the soft chancre. The results of these experiments were decisive, and M. Straus then abandoned his former opinion. Thus, continued M. Fournier, in France the reality of the existence of the chancrous bubo is accepted, only it is less frequent than it is believed to be. M. Leloir had also sought by inoculation to demonstrate the existence of chancrous bubo. In one case, in which he had been clearly successful, the pus was obtained by aspiration by means of a Pravaz's syringe. M. Petrini had tried to produce soft chancre with pus from various sources, as in cases reported by Finger, but with perfect antiseptic precautions he had always failed. He thought it probable that in Finger's experiments sufficient attention was not paid to this point.

464. *Landouzy on Cases of Syphilitic Contagion during the Tertiary Period.*—Of the two cases of this kind related by M. Landouzy only the most meagre details are given. In the first, a man who had contracted syphilis five and a half years previously, since which time he had shown no signs of disease, is said to have communicated it to his wife whose disease began with a chancre of the vulva. In the second case a man had a gumma of the penis, the author's diagnosis of the nature of the lesion having been confirmed by M. Fournier. The patient had married a few months before, and M. Landouzy found the wife suffering from syphilitic roseola, enlarged glands, &c., but he could not detect any trace of a primary sore. M. Hardy had seen two cases which confirmed M. Landouzy's assertion as to syphilitic contagion without any external manifestation. M. Fournier said he had recently seen a young man who had contracted syphilis fifteen years before, who had been treated and had recovered, and who asked permission to marry. After marriage the patient had pulmonary trouble, in all probability of a specific nature, and then sclerous glossitis with small erosions on the tongue. The man was a confirmed smoker and M. Fournier warned him of the danger of infecting his wife. Two years later the wife came to M. Fournier with a chancre of the lower lip, together with secondary symptoms. The husband had only some insignificant erosions on his tongue. M. Balzer called attention to the fact that mucous patches might appear time after time for an almost indefinite period. He had seen a girl of sixteen who had inherited syphilis, and who since her birth had had almost constantly mucous patches in her mouth. M. Zambaco declared himself sceptical, especially with regard to M. Landouzy's first proposition, namely, the power of a syphilitic person long ago cured, and with no signs of syphilis, to communicate the disease. A great many cases would be required to change so completely our ideas on the subject.

465. *Le Dentu on the Treatment of Ano-rectal Syphiloma by the formation of a Temporary Artificial Anus.*—The patient in this case was a woman with syphilitic disease of the rectum, who came under observation in 1887, and in whom, some months after linear posterior rectotomy had been performed, a new stricture was found at the sigmoid flexure opposite the sacro-vertebral angle. For this an artificial anus was made [in what position is not mentioned] with the intention of keeping it open only until such time as specific treatment had been successful in getting rid of the stricture. The operation was performed on January 18th, 1888, and injections were used from above through the lower portion of intestine. Ulceration due to partial digestion recurred in the site of the artificial anus, and led to prolapse of the upper portion of the bowel. The operation did not answer the expectation of the author, for the lower portion of the bowel still remained the seat of sclerous induration which diminished the calibre of the rectum. The author draws attention to the unusually high position of the stricture in this case, and is of opinion that in treating cases of this kind the artificial anus should be kept open for a long time, and that the operation should be performed before the rectal lesion had undergone a fibrous change. Hahn, of Berlin, had treated eight cases of ano-rectal syphiloma by the formation of an artificial anus. In two of these the patients rapidly died; three died from caehexia in less than nine months, and in the remaining three, decided amelioration occurred. In these cases, however, the artificial anus was not meant to be merely temporary as was the intention in M. Le Dentu's case.

466. *Maieff on the Pigmentary Syphilide.*—According to the observations of M. De Maieff, of St. Petersburg, this affection begins with uniform and diffused pigmentation of the skin of the neck, chiefly the lateral and posterior surfaces. At this time the colour is a yellowish grey-brown, and the neck looks as if it were dirty. After a certain time lighter spots appear on the dark background, and as these spots multiply and increase in size, the skin gradually assumes a characteristic net-work or lace-like appearance, the pigmentation of the darker portions of skin meanwhile becoming deeper. As regards the histology of the morbid change the author's researches have led him to believe that the pigmentary syphilide is due to a chronic specific inflammation of the small blood vessels of the skin. At first there is a change in the endothelium and also cellular infiltration of the adventitia, giving rise to disorder of the circulation. The red corpuscles then lose their pigment which infiltrates the adventitia, the connective tissue cells, the Malphigian layer, and finally the lymphatic canals. Later on the vessels are completely obliterated, and the papillæ of the skin become stunted and artophied. The pigmentation then becomes slighter and at length disappears altogether, leaving only a white patch on the skin. M. Enthyboule related a case of pigmentary syphilide which occurred as a late symptom of the inherited form of disease. M. Hardy said he believed he himself first called attention to the pigmentary form of syphilide. As far as he knew the affection was almost exclusively seen in women, though he had observed it in fair men with fine white skins. The syphilide disappeared extremely slowly, lasting three or four years at least, and, moreover, treatment had no effect upon it. Bazin denied the syphilitic origin of the affection.

467. *Portalier on the Relapse, in situ, of certain Syphilitic Lesions.*—M. Portalier's observations related to the relapse, *in situ*, many times repeated, of some syphilitic lesion which varied according to the different patients, but was always the same in each particular person. The author thought such cases were not rare, and he had collected eleven unpublished examples from which he had carefully eliminated all those of relapse from local irritation—for example, erosions of the buccal surfaces in smokers or subjects of alcoholism. The author divided his cases into two categories:—(1) Cases of relapse, at a more or less advanced period of the diathesis, of specific lesions which agreed in their nature with the period of the disease at which they appeared. These included tubercular, ulcerating, and gummy syphilides, appearing four, five, eight, or even ten years after infection. (2) Cases of relapse of lesions of a secondary character at an advanced period of syphilis. M. Fournier said relapses, *in situ*, of the kind spoken of by M. Portalier might occur at all stages of syphilis. They had all seen, for example, an infecting chancre heal and cicatrize, and afterwards again become eroded and ulcerated. This was the chancre *redivivus* or *redux*. Then, in the secondary period, one sometimes saw specific lesions proper to this period reproduced *in situ;* for example, psoriasis palmaris and syphilides about the mouth. As regards the tertiary period, scrotal phagedæna might be mentioned, as well as the occurrence of frontal exostoses. M. Fournier had seen as many as fourteen relapses in a case of exostosis of the left frontal eminence. Such cases as these were extremely curious, and explained the secret of certain relapses which were manifest only by their effects, such as the relapses (which were very frequent) of syphilitic affections of the nervous centres. The most plausible explanation of such phenomena was, that after apparent cure of some syphilide, there remained behind, *in situ*, certain germs which remained inactive until some cause or other roused them into renewed activity. This, perhaps, was not altogether hypothetical, for M. Neumann had recently examined histologically certain regions of the body formerly the seat of syphilides which had been cured, and he had found, even up to a period of two years after apparent cure, collections of embryonic cells around the sebaceous and sudoriparous glands. These interesting facts were, in M. Fournier's opinion, another argument in favour of prolonged treatment of syphilis. M. Ehlers, of Copenhagen, thought that, in certain cases of chancre *redux*, surgical treatment was indicated in addition to continuous general treatment. He had observed a case of triple relapse of an infecting chancre. M. Diday remarked that, notwithstanding the persistence of germs, he did not believe in the preventive power of continued treatment; and in support of his belief mentioned the case of a student who, at the end of prolonged mercurial treatment for chronic gonorrhœa, contracted a chancre and had an attack of syphilis of ordinary severity and duration. M. Hardy related the case of a woman, the subject of vaccinal syphilis, who presented at the upper part of each arm, at the site of vaccination, three prominent round tubercles a little larger than lentils. They appeared 25 days after the vaccination, which did not take. Ten days later the lesions had ulcerated and were covered with green scabs which fell off after a month, leaving brown slightly-depressed scars; various secondary symptoms followed. Two and a half years after infection, at the same time as the outbreak of a papular eruption, there appeared at the site of the cicatrices of the primary sores a new outbreak of tubercles similar to the first, but without ulceration or scabbing. M. Leloir, among

other examples of relapsing syphiloma, had observed one in which chancriform ulcers formed every spring for ten years consecutively at the site of the primary sore. M. Leloir also remarked that he had, in 1885, considered these chancriform syphilomata to be "local revivals" of the virus, and that he was happy to find this opinion confirmed by MM. Diday, Fournier, and Hardy. General treatment in cases of this kind was not sufficient. M. Leloir had obtained excellent results by the continuous application of a piece of mercurial plaster. M. Hallopeau said it was not rare for the return to occur, not exactly at the site but in the neighbourhood of the site of the primary lesion. The same thing also occurred in the case of visceral syphilides—those of the nervous centres, for example —as well as in those of the skin. He also agreed with M. Leloir that local treatment was necessary when the lesions were on the skin. M. de Watraszewski, of Warsaw, said the application of mercurial plaster was not always sufficient; it was often advisable to resort to scraping by means of Volkmann's spoon.

Arthur Cooper.

468. *Lydston on Tropho-Neurosis as a Factor in the Phenomena of Syphilis.*—Lydston regards syphilitic fever as the result of the action of the poison on the sympathetic ganglia, and explains its inconstancy by idiosyncrasy. That only some individuals suffer eruptions from the ingestion of certain foods and drugs is an analogous fact. Roseola is like other syphilitic phenomena in being dilatation of the capillaries, without localised collection of syphilised cells. The symmetry of the later manifestations is also to be explained by the effects of the poison on the vaso-motor and tropic centres; and the proneness of the papillary layer of the skin to suffer is due to the narrowness of its blood capillaries and their intimate connection with the lymphatics. Lastly, the alopecia, the extensive piebald character of which is so pathognomic, is a neurosis rather than the effect of eruptions locally. Certain debilitating fevers and neuralgia produce malnutrition of the skin, and the hair of the scalp is apt to blanch or fall, as it is an epidermal tissue of low vitality and with an inferior vascular supply than those of other parts of the surface. The cervical ganglia, and especially that which gives the filaments distributed with the fifth cranial nerve appear to be far more prone to the attacks of the poison than those of the trunk, and the affinity of the syphilitic process for the iris is possibly due to the largeness of its sympathetic supply. The author urges that mercury and iodide of potassium act by promoting fatty degeneration and then elimination of the syphilitic products rather than by antidotal effects. The former acts on the sympathetic centres, as is shewn by the ptyalism it excites—mere local irritation not being a sufficient explanation. He finally compares the effects of the syphilitic poison on the cervical sympathetic to the results produced by the destruction of the centre in animals, which are so well known to the experimental physiologist.

E. D. Mapother.

Ophthalmology.

RECENT PAPERS.

461. Chisholm, Dr. Julian J.—On the After-Treatment of Cataract. (*New York Medical Record*, May 17, 1890.)

462. Abadie, Dr. C.—On a New Treatment for Sympathetic Ophthalmitis. (*Annales d'Oculistiques*, March, April, 1890.)

Art. 461. *Chisholm on the After-Treatment of Cataract.*—The author of this paper (communicated to the members of the Medical and Chirurgical Faculty of Maryland) has had thirty years, experience as an ophthalmic surgeon, during which period he has performed over eighteen hundred cataract extractions. For twenty-five years he treated his patients after operation according to the orthodox method, keeping them absolutely quiet on their backs in bed in darkened rooms, with both eyes closed under heavy compresses and carefully adjusted bandages. During the last four years he practised just the opposite treatment of closing only the eye operated upon, and allowing the patient to occupy a well-lighted room, without confinement to bed or bodily restraint of any kind. He only closes up the eye he has operated upon by a strip of soft salicylated silk isinglass plaster, and then leaves the other eye open, so that the patient can see to walk about, to feed himself, and to make his own toilet at bedtime and when he gets up in the morning. The eye operated on can be daily inspected through the diaphanous adhesive plaster. By the fifth day the corneal wound has healed and the strip of adhesive plaster removed. He claims for this treatment better results than he ever got in previous years when he practised all the restraints in general use. Hernia of the iris very rarely occurs, and not more frequently than in the practice of those surgeons who still think the darkened room, rest in bed, and absolute quiet essential to success.

George Brown.

462. *Abadie on a New Treatment for Sympathetic Ophthalmitis.*—The author accepts without reserve the theory that sympathetic inflammation is due to the immigration of microbes, and bases his treatment on this. Briefly the theory is as follows:—In consequence of a perforating wound the tissues become infected by microbes, these proliferate, gradually reach the deeper parts of the eye, travel up the optic nerve to the chiasma, and down the other optic nerve to the other second eye; where, if they meet with no sufficient obstacle, they may cause complete disorganisation. It is evident that if enucleation is performed before the optic nerve of the injured eye has become affected, in other words if the section is made through healthy structures, sympathetic inflammation cannot occur. On the efficacy of immediate enucleation in this respect, all are agreed, whatever theories they may hold on the mode in which sympathetic inflammation is produced. But when we come to consider the treatment to be adopted when sympathetic inflammation has already declared itself, opinions at once begin to diverge. In olden days, when it was looked upon as due to reflex irritation, enucleation was generally thought to be clearly indicated. The question must now, however, be considered from an entirely different standpoint. The microbes that have entered the wound proliferate with great activity, because the vital energy of the contused tissues is less than their own. It is here that they commence their work of destruction, and it is only when their number has become considerable, and their activity great, that they are capable of attacking healthy tissues, and, therefore, of reaching the deeper parts of the eye. Even though the second eye may have already become infected, enucleation may be effective, for the microbes in this eye may be few in number, and the vitality of the healthy tissues may be greater than that of the intruders, consequently if these are not reinforced from the original colony recovery may ensue. The author thinks that it is beyond dispute that the chances of recovery will be greatly increased by sub-

jecting the patient to a course of mercurial inunction, the mercury acting as a microbicide. If, on the other hand, enucleation is performed later, when the second eye has been long invaded, it is likely to be ineffectual, because the number of microbes is great, and the resistance of its tissues lessened. Consistent with these views is the clinical fact, that has often been observed, that, when a sympathetic inflammation has been arrested by enucleation, or other means, an early operation on the sympathising eye may rekindle the mischief. For the microbes only lose their vitality after a long time, and the resistance of the tissue is enfeebled by the injury inflicted by the operation. Immediate enucleation therefore is certainly efficacious, and later it may still be effectual if combined with mercurials, and even when it fails to arrest the disease it is harmless (this, however, is not the view held by Mauthner). The author, however, believes that the necessity for enucleation may be avoided by a thorough antiseptic treatment of the wound. If this can be adopted immediately, nothing more is necessary, but if the wound is already infected he cauterises it with the galvano-cautery, carefully attacking all its recesses. He admits, however, that this will not always prevent the development of sympathetic inflammation. If this should appear he recommends the injection into the exciting eye of one or two drops of 1 in 1,000 solution of corrosive sublimate; this sets up rather severe reaction, but he has seen it followed by improvement in both eyes. In one case in which the disease progressed in spite of injection, enucleation, and mercurial injunction, it was arrested by injecting a drop of sublimate (1-1000) into the sympathising eye. In the author's opinion enucleation should be reserved for quite exceptional cases, in which the injury is so severe that all hope of preserving the eye must be abandoned. Even when sympathetic inflammation has occurred, he considers it better before resorting to enucleation to cauterise the wound and inject the eye. When, in spite of all, an eye has been severely damaged by sympathetic inflammation, any operation for the restoration of vision should be postponed till the virulence of the microbes in it has become extinct, and this can be attained more quickly by injecting sublimate. [There are probably few who now dispute the septic origin of sympathetic inflammation; but from this to the adoption of the above suggestions is a very long step, for this involves the assumption that an eye which has been inoculated with septic organisms in a condition to proliferate can be sterilised by the injection of 1-500th of a grain of corrosive sublimate, an assumption of which, as it seems to us, there is no proof. If we could be sure that the trunk of the optic nerve were still free, and if the objections to enucleation were considered insuperable, evisceration, with or without the introduction of a sphere, would certainly seem to be safer.

W. Adams Frost.

Reviews.

Article 482.

Etude Anthropométrique sur les Prostituées et les Voleuses. Par le Dr. Pauline Tarnowsky. Paris, 1889: Aux Bureaux du Progrès Medical.

The material from which the observations in this book were derived was obtained in the hospital of Kalinkine, so far as the part relating to professional prostitutes is concerned, and in the prison of Litowski, for that dealing with female thieves. On the inmates of these institutions, during a period of four years, the author has carried out a series of observations and measurements, which cannot fail to be of great interest and value to those desirous of investigating the natural history of the criminal and semi-criminal classes. The work contains several anthropometric tables and twenty figures of faces, &c., of the subjects studied. The main facts and deductions of the book are summed up as follows:—(1.) Professional prostitutes are incomplete beings, having undergone arrests of their development; are tainted with a morbid inheritance, and show signs of physical and psychical degeneration in relation with their imperfect evolution. (2.) The signs of physical degeneration due to an imperfect organisation show themselves among prostitutes principally by the frequency of deformities of the head, of anomalies of the cranium (41·33 per cent.) and of the face (42·66 per cent.), by numerous anomalies of the ears (42 per cent.), and by defective teeth (54 per cent.). (3.) Their psychcical abnormality is exhibited either by a feebleness of intellect, more or less pronounced, or by a neuropathic constitution, or by a notable absence of the moral sense; the fact is confirmed, beyond this, by their abuse of their generative functions, as well as by the fascination which their debased occupation has for them, since they return voluntarily to it after their liberation. (4.) The marks of degeneration are most pronounced in those prostitutes and thieves whose mothers were addicted to drink. This confirms the hypothesis that the influence of the mother is especially potent on the organism of the child. (5.) The sterility and extinction of the race, often observed amongst professional prostitutes, depend in great part upon their abnormal condition, fertile in hereditary defects; this point seems to confirm the fact of their degeneration. (6.) Habitual prostitutes, who cannot be classed amongst healthy and normal individuals, by the very activity which they exercise, make up the over-large deficit which criminal statistics establish in favour of women. (7.) Female thieves, though also presenting a great number of physical and moral signs which notably distinguish them from honest women, are less removed from the normal type than prostitutes, for the following reasons:—(*a*.) They are burdened with a less heavy hereditary blemish than that of prostitutes. (*b*.) The number of marks of degeneration which they present is less than that of prostitutes. (*c*.) The number of births amongst them is more considerable. (*d*.) The principal diameters of the skull, as well as the total horizontal circumference, of thieves, exceed those of prostitutes (the two classes belonging to the same race). (*e*.) The zygomata and inferior maxillæ of prostitutes are larger than those of thieves. (*f*.) The intellectual and moral horizons of thieves are loftier than those of prostitutes. The thief has more *amour propre*; her wit is more lively; she is more energetic, and brings more resistance into the struggle of life. She is much less idle and does not fear work. (*g*.) However incorrigible the professional thief may be, and however numerous her misdeeds may have been, she cannot, nevertheless, commit them and repeat them at every hour of the day, like the prostitute, it being conceded that robbery and the traffic in the person are two vices equal in degree. Let it be conceded for a moment that the two faults are of equal criminality. In all cases the thief only offends at intervals and on occasions; whilst the prostitute of the tolerated houses traffics with her body without cessation, abandoning the right of choosing or refusing; moreover, she is content with her degraded existence, and does not wish to change it. (8.) Anthropometric results, as well as researches into the heredity of thieves and prostitutes, the circumstances of their birth, of their subsequent life, together with the study of their intellectual and moral horizons, all unanimously concur to prove that these two groups belong to an abnormal class of females degenerate or degenerating. They are the product of the low places, of the dregs of society, and their number diminishes as the circumstances of development become improved in a cultivated society. After studying the results obtained by the investigation of these classes, the author adds the following suggestions as to the most probable remedy for the evil. To cure the evil which produces these stray sheep of civilisation, it is not sufficient to punish them only, as is now the rule. The evil must be attacked at its source; the conditions amongst which those abnormal females are born and live must be improved; their misery must be diminished by enlarging the paths of honest and remunerative work for women desirous of remaining honest, and by admitting them to various professions and pursuits, now chiefly carried on by men. All new directions for honest work for women diminish necessarily the difficulty which they find in earning their bread and lessen their unhappiness—that evil counsellor, which, apart from innate inclination, urges to debauchery and vice. Children should be withdrawn from the evil influence of vicious parents by means of the education so necessary for them. The ravages which drink, syphilis, and other evils of the parents cause, should be diminished; in fact, as much care as possible should be taken that parents should procreate a healthy race free from hereditary taint.

Bertram C. A. Windle, M.A., M.D.

Article 483.

Antiseptics in Surgery. By E. Stanmore Bishop, F.R.C.S. London: Sampson, Low & Co., Limited.

Mr. Stanmore's little annual instruction on the Theory and Practice of Antiseptics comprises three lectures to nurses, in which the reasons for absolute cleanliness in the treatment of wounds are clearly laid down, and illustrated in simple and easily understood language. The meanings of "Antiseptic" and "Aseptic," as these terms are employed by surgeons, are explained; and the right and the wrong method of dealing with wounds with a view to recurring healthy union of their edges, so far as they depend on the exercise of the nurses' functions, are definitely pointed out, the *rôle* of the omnipresent germ in the processes being especially dwelt upon and condemned. In speaking of the influence and injury to living tissues protected from atmospheric infection, Mr. Bishop employs the process of bistournage, as practised by farmers in France, as one of his illustrations, but the circumlocutions to which he has been driven in his efforts to avoid using the name of "the organ in the body" involved in the proceeding, prompts the supposition that he might better have omitted all reference to the experiments if it was improper to speak of the tests before a class of nurses. This, however, is only a small defect in a work which most excellently fulfils the design its author has had in view, viz.: to write a simple and accurate guide to the measures specially requiring attention from those engaged in the responsible duties of surgical nursing. We learn that this little volume is the first of a series of hand-books for nurses; and should those which follow it be equally deserving, they will be welcome.

Article 484.

Companions to the latest Edition of the British Pharmacopœia. By Peter Squire. Fifteenth Edition. Revised by P. Wyatt Squire and Alfred Herbert Squire. London: J. and A. Churchill, 1890.

The medical public are really under very great obligations to certain of our leading pharmacists for the trouble they have taken to produce compendia conveying such a large amount of useful practical information on subjects in which practical information is half the battle. That this volume in particular has a *raison d'être* is sufficiently established by the fact of its having attained its fifteenth edition in about twenty-five years. The number of additions, especially under *not official* headings, is very great, and this matter constitutes one of the most interesting parts of the work to the practitioner, who finds here what cannot easily be ascertained elsewhere, viz, trustworthy data on which he may safely proceed to prescribe or dispense remedies which have not yet come into general use. In truth, the subject-matter is no mere compilation, but bears internal evidence of the close scrutiny to which the various items have been subjected before being enshrined in the text. Given the febrile activity which has characterised modern therapeutics and modern pharmacy, it is not surprising to find that an addition of some seventy pages to the already substantial volume has been found indispensable. Contemporaneous literature has been largely drawn upon to furnish its quota of information; the medicinal properties and therapeutic index have been revised and extended, and the department of "antidotes" has been strengthened by additions from Dr. Murrell's excellent little work on "What to do in cases of Poisoning." In fact, every department shows traces of systematic revision, and the present volume fully maintains the reputation of the "Companion" as a standard work of reference.

Article 485.

The *Medical Chronicle* for May contains a brief article from the pen of Dr. Renaud, of Manchester, with the title of "Reminiscences of the Influenza Epidemics of 1837 and 1847." Dr. Renaud considers that the recent epidemic differed from those of the two years named on the greater severity of the headache and bone-aching symptoms observed among victims of the former; and he points out that instead of following in the wake of influenza, as it has been suggested may now be the case, cholera *preceded* the epidemic of 1837 by nearly four years. In the same issue of the *Chronicle* Dr. James Ross continues his admirable communication on peripheral neuritis, the cases here recorded being instances of alcoholic paralysis, and being especially interesting and instructive, the reports, prepared by Mr. H. Part and Mr. W. C. Wright, clinical clerks, affording excellent examples of careful and exact observation. A case of severe chorea attended by paresis and loss of speech for eighty-one days, complicated with peri-endocarditis and a great development of fibrous nodules, death ensuing after eight-and-a-half months' illness, is described by Dr. Ashby; and a case of vaginal hysterectomy, performed for cancer by Professor W. T. Sinclair, is reported by Dr. T. Porter.

ARTICLE 486.

New International Journal of Neurology.—Students of neurology heard with regret that Dr. Erlenmeyer's *Centralblatt für Nervenheilkunde* was given up at the end of 1889, after having continued for twelve years. Fortunately, Dr. Erlenmeyer thought better of it, and determined instead to keep together his able staff of contributors, and continue the *Centralblatt* on a new footing. Instead of appearing twice a month, it is now to be published as an international monthly serial. On the cover is given the names of nine associate editors, representing different nations, but the working editor will be Dr. Hans Kurella, of Allenberg, whose great linguistic and scientific knowledge fits him for such an undertaking. To keep up its international character, original articles will be taken in German, French, and English. The first article is on "Les Progrès Récents de l'Anthropologie Criminelle," by Professor Lombroso. The strength of the periodical will in great part consist in the *résumés* of important papers from different languages.

ARTICLE 487.

Medical Journal in Malta.—We have to acknowledge the two first numbers of *La Rivista Medica*, a bi-monthly medical journal, published at Malta. The object, as stated in the programme, is not only to communicate the results of medical science as given in the best publications of the continent, but to publish the clinical observations from the hospital and private practice of Malta. There is no doubt that many observations useful to medical science might be thus recorded. Amongst the contributions we observe "Notes on Eye Diseases," by Dr. L. Manché, whose able and ingenious work, "L'Ottamologia in Quadre Sinottice," we have read with great profit. In the second number, Dr. Manché commences a paper upon "Ophthalmia Neonatorum," which is of a practical character. We wish a long and pleasant life to the new-born periodical, which is a sheet of eight pages, published at Valetta.

New Articles.

WE have received from Mr. John Morgan Richards (agent for Eli Lilly and Co., of Indianapolis) a "trial sample" of their *Pilula Aphrodisiaca.* These are stated to contain ext. damiana, phosphorus and nux vomica, possibly a very serviceable combination, but not one which is solely or even principally aphrodisiac in its effects. Indeed, we have grave doubts whether aphrodisiacs belong to therapeutics proper, seeing that physiological impotence is presumably a damper placed by nature on appetites, the gratification of which would be prejudicial to the organism. We have not felt justified in putting these pills to the test, though we can conceive that the formula may prove of use in other and more strictly professional directions. They are very elegantly put up as pink ovoids and are readily soluble.

Miscellany.

COLONEL NORTH has generously contributed a sum of £500 towards clearing off the debt of £2,000 remaining due on the building fund of the new French hospital in Shaftesbury Avenue.

IN consequence of Dr. Pavy's retirement from the post of senior physican at Guy's Hospital, Dr. W. Hale White has been appointed full physician and Dr. J. W. Washbourn assistant physician.

A Calculus of Excessive Size.—A vesical calculus of unusual dimensions, measuring ten inches in circumference, four in length, and weighing nineteen ounces and five drams, is described in the *Indian Medical Gazette* as having been removed from a native Indian, aged fifty years, by Brigade-Surgeon J. Barter. The stone was recognised to be a large one, but there was no suspicion of its real proportions until, after lateral lithotomy, it was found impossible to extract it through the perineal incision, and the supra-pubic operation was accordingly resorted to for its removal. The case terminated fatally forty-eight hours after the operation, recovery from shock never having taken place. The article in the *Gazette* is illustrated with a drawing of the calculus of natural size, and references made to other instances in which unusually large calculi have been removed from patients in the Inazo Hospital at Nagpore, where Brigade-Surgeon Barter's case also was treated.

A REMARKABLE case of fraudulent entry on the *Medical Register* recently came to light, although the culprit has since put the sea between himself and the representatives of outraged justice. A certain Owen was proceeded against in 1885 for signing vaccination certificates, not being a registered medical man. He explained that his name had by accident been allowed to drop out of the *Register* and he accordingly made application in the name of a Mr. Richard Jones Owen, whose name had, as a matter of fact, been deleted for failure to communicate his address to the Registrar. This name was accordingly restored, and Owen No. 1 thenceforth practiced on the strength of the restoration. Some proceedings for perjury in connection with evidence given at an inquest led to the substitution being discovered, and the case was brought to the notice of the General Medical Council. In the meantime, however, he absconded, and a warrant had been issued for his arrest. The occurrence suggests sundry qualms, as to the possibility of such frauds being carried out with impunity, and it has been suggested that precautions should be taken to prevent their occurrence.

Vaccination in India.—A valuable communication on the prevalence of small pox in Calcutta, read before the Medical Society by Dr. K. C. Bose, of that city, and reported in the *Indian Medical Gazette*, contains a great deal of most interesting information concerning the gradually-awakening attitude of the people of India in regard to the prophylactic influence of vaccination. Dr. Bose declares that he has never seen small pox occur in a re-vaccinated person, and he very frequently vaccinates those smitten with the disease on the second day of the fever with the most encouraging results, and vaccination during the incubative stage he considers to be, at his hands, the means of preserving very many lives. On the question of popularising vaccination among natives the deputy-superintendent of the process for Calcutta declares that Dr. Bose's assistance has been effectual in enabling the protection to be introduced into a good many respectable houses, the dread excited by the prevalent epidemic being used as an important agent in the conversion of the people. He firmly believes that as its protective virtues are appreciated, vaccination will grow in favour and become general by-and-bye.

The London Medical Recorder.

ARTICLE 585.

THE MONTHLY MIRROR OF MEDICINE.

MEDICAL literature during the month of June has been much enriched by the Croonian Lectures at the College of Physicians, delivered by Dr. Ferrier upon his favourite subject, "Cerebral Localization." Dr. Ferrier in his first lecture sketches the evolution of the doctrine of cerebral localization, and he then proceeds to indicate the principal data on which such is based, and then discusses, in the light of the most recent investigations, the evidence for and against the existence of specific centres, and their exact position in the cerebral cortex. Those interested in the subject of cerebral localization would do well to read these lectures, which are published in the *Lancet* and *British Medical Journal.*

Dr. Hadden contributes a very interesting communication upon head-nodding and head-jerking in children, commonly associated with nystagmus. In his preliminary remarks Dr. Hadden calls attention to the fact that very scanty notice is taken of this subject in text-books relating to diseases of children. He believes that the condition has been hitherto confounded with a special variety of epilepsy, known as eclampsia nutans or the salaam convulsions, while he regards it as distinct and separate from salaambic convulsion, but in some instances fits of an epileptic character do occur. In an analysis of eleven cases Dr. Hadden found that the movement in one case was purely nodding, like those of a mandarin doll (movements of assent). In four the movements were lateral (negation movements). In one of these the tendency was to go more to the right, and in another to the right and downwards. In one case there was a combination of lateral and rotatory movement, and in three a combination of nodding and shaking or lateral movements. Dr. Hadden thinks mere direction in which the nodding takes place is not of essential importance, and that a distinction founded upon such a basis is artificial. As regards the muscles used in these movements, Dr. Hadden quotes Henoch: "All these cases show that the movements characteristic of spasmus nutans are almost never confined to the proper muscles of nodding (sterno-mastoid), but also affect the muscles which rotate the head-nodding and more or less distinct rotation, generally towards the same side, are almost always combined. Indeed, in many cases I have found the rotatory movement by far the most marked, and the nodding very slight." The nystagmus is usually very rapid, probably varying between four to six movements per second. It is often continuous, though aggravated by attention, by efforts at fixation, or by forcibly restraining the head movements. Occasionally nystagmus will make its appearance when the head is held, though it may have been previously absent. In one case observed by Dr. Hadden, the nystagmus was exaggerated on extreme conjugate deviation to the left, and least marked on deviation to the right; in another instance the nystagmus was especially evident when the eyes were directed upward. Gordon Norrie, of Copenhagen, also alludes to a change in the character of the movement when the eyes were turned in certain directions. Nystagmus is usually in both eyes, but often one is more affected than the other. In three cases seen by Henoch the nystagmus was unilocular. In one case of Dr. Hadden's, and in one of Gordon Norrie's, the head tended to move in a direction away from the nystagmic eye. In seven of Dr. Hadden's cases the optic disc was examined, in six cases it was normal, in one case the fundi were very light coloured, and there was a slight crescent of atrophy around the left disc. The pupils were examined in five cases. In one it was doubtful if the pupil acted with convergence. In another case the pupil of the nystagmic eye acted better consensually than with light. In another case the pupils were active to light, but they also oscillated much independently of retinal stimulation (hippus.) Hippus was also present in one of Gordon Norrie's cases. In one case during the subsidence of the head-jerking the child used to look at objects sideways, and usually to the right. In another case in which there was vertical nystagmus of the left eye, it was noticed, soon after the child came under observation, that on directing attention to anything the child used to turn his head to the left, apparently in order to use his right (non-nystagmic) eye. In two patients certain seizures were noticed, in which there was temporarily loss of consciousness. In one case the attack consisted in deviation of the eyes strongly to the left and downwards, the head also turning in the same direction, the pupils being dilated. For a moment the child seemed to be quite unconscious. These attacks persisted for six months after the nystagmus and head-jerking had ceased. In two other cases momentary attacks of unconsciousness were said to occur. In only one case was there a marked history of infantile convulsions. Congenital syphilis is not believed by Dr. Hadden to have any influence in the causation of the nodding, &c. And there does not appear to be any special liability to head-jerking in either the earlier or later born children of a family. In Henoch's cases dentition appeared to be a constant cause. In one of Dr. Hadden's cases the movements came on during whooping-cough; in another case, in relapse after measles; and in another case, during an attack of aphthous stomatitis. In most cases the general health was good. Eight of the cases recorded were females and four males. What is the nature of these cases? Henoch remarks: "From an anatomical and physiological point of view, the frequent combination with nystagmus, less commonly with strabismus, is interesting." Ebert and Demme have also noticed this combination; and this combination appears to indicate that the root-nuclei of the spinal accessory and the upper spinal nerves, supplying the affected muscles of the throat and neck, stand in a very close relation to those of the ocular nerves. Recently Dr. Hughlings Jackson has suggested that these cases are a variety of spinal or spinal-system chorea. Dr. Hadden believes the real nature of these cases may be explained by considering the evolution of purposive movements in the child. As early as six weeks the child will follow an object with its eyes. The movements are imperfect and irregular till about the fourth month, when the movements of the head and eyes become harmoniously associated. In this head-jerking Dr. Haddon believes that there is a dissolution, or rather a derangement, of movement.

Passing from this very interesting contribution to medicine in its relation to children's diseases, we record Dr. Auld's two cases of sub-acute rheumatism, in which collapse followed the administration of salicylate of sodium. In one case, a female, 100 grains of salicylate of sodium was given daily. Four days after the first dose, giddiness, confusion of ideas, and weakness followed. The following day the giddiness became worse, and the patient was unable to get out of bed. The next day she was delirious and prostrate. The drug was stopped and the patient became quite well. In the second case the same dose was ordered, and after it had been taken for six days, there was great dyspnœa, slowness of the pulse, general paralysis, the patient being unable to speak, delirium was not much marked; untimately the drug having been discontinued, the patient recovered. Dr. Armand Semple relates a case of chorea in a child of six years, in which iquor arsenicalis was given. At first a three minim dose was given, which was subsequently increased to ten, which was continued for about four weeks, when paralysis of both legs occurred, and weakness of the right arm, and subsequently pigmentation of the skin occurred. Pigmentation of the skin combined with paralysis is a rare symptom following the continuous use of arsenic. Dr. Wills records two interesting cases of hæmorrhagic urticaria. This affection is by no means common. The two cases reported were both males; one was 17 years old and the other 28 years old. In the former case the patient first noticed, on March 1st, that both ankles and the right knee began to swell. They were slightly painful and swollen at night. On March 28th, a small, red, slightly raised spot, a quarter of an inch in diameter, was noticed, which was soon followed by other similar spots. At first the spots were red and itched slightly. On admission, on April 4th, the hand and arms, and to a less degree the face and buttocks, were covered with numerous slightly raised spots of an inch in diameter, the most recent of which had the appearance of ordinary urticarial wheals, but the older ones were of a dark purple colour, from the presence of effused blood. There was considerable effusion into the right knee, but no pain. The examination of the blood showed a slight excess of white blood-corpuscles, and no micro-organisms; at one time, while under observation, hœmoptysis occurred. The patient subsequently became quite well. The second case had spots similar in character, but in addition had subperiostal swelling of the radii. Dr. De Saussure, of Charleston, gives an interesting summary of the histories, &c., of 22 cases of filaria sanguinis hominis which he had collected. Of these cases he found the disease was distributed as follows: 9 coloured males, 6 coloured females, 5 white males, and 2 white females; of the 22 cases 16 were in married people, all of whom had children. In over one-half of the cases, filaria were searched for in children of the married, in husbands or wives; or in friends and bed-fellows of the single ones; and yet but in a single instance were two cases found in the same house. As to social conditions, 15 were colored, 7 white, of the latter only three could be said to be in high life; all of the others, black and white, belong to the lower and middle classes. As regards diet and water—in the summer months fish of some sort takes the place of meat; the water, for consumption, is mainly pump or artesian. Dr. Buchner has recently made some experiments upon the anti-bacterial power of the blood, in which he concludes that corpuscles alone have not this power, but that it depends also upon a definite peculiar condition of the albuminoid bodies of the serum. Dr. August Haupt, of Soden, in a pamphlet headed "The Importance of the Heredity of Tuberculosis in comparison with its Propagation by Sputum," maintains that the inheritance of tuberculosis from parents or ancestors cannot possibly be disputed, and that the theory of absolute contagion is weakly founded. He quotes the words of Professor Leyden: "Immediately after the discovery of the tubercule bacillus, there was a tendency to attach much more importance to contagion than before, but further observation has shown that it does not play so very great a part, and that the majority of cases are due to heredity." Of 680 Italian physicians 59 declared for contagion, 124 against it, and 497 mainly for heredity. In England, 792 out of 1,078 declared against contagion. In Dr. Haupt's experience of Soden, he finds that the inhabitants of the place number 1,500, and of these 101 let lodgings (Soden, it must be remembered, is a health-resort for consumptives). In most of the houses the wives, with sisters or daughters, wait upon the phthisical patients who come to Soden. The servant-girls attend to the rooms, beats the carpets, and remove the sputum. In the winter the landlord and his family occupy the rooms of the patients. Between 1855 and 1888, 48 of the 238 members of such families died; 10 died from tuberculosis. In six of these ten cases heredity was demonstrable, and the remaining four were due to colds and external causes; of the 415 servant-girls 17 died, 5 of tuberculosis, which was proved to be due to other causes than infection. Therefore, in 30 years, amongst 653 persons, there were 15 deaths from tuberculosis not caused by infection from people who freely mixed with tuberculous patients, their rooms, and their excreta.

Article 586.

THE MIRROR OF SURGERY.

Surgery is ever progressive, and undoubtedly the most interesting example of surgical progress during the past month is the report in the *British Medical Journal*, for June 14th, of Professor Ullmann's case of extensive re-section of the front part of the left chest-wall for severe tuberculosis of the left pleura and left lung. The operation was performed as long as two years ago, and the patient was shown this year at the Congress of German Surgeons in Berlin. The tuberculosis of the left pleura and left lung was made accessible for purposes of local surgical treatment by removal of the fore part of the left chest-wall, which was also affected with tubercular disease. The heart was displaced to the right, behind the sternum, as the result of an empyema of more than two years' standing. The front part of the left chest wall, tuberculous and riddled with fistulæ, was re-sected *in toto* for an extent of from 5 to 12 centimètres from the second to the sixth rib, close to the left sternal border. The breadth of the portion of the thoracic wall removed was 5 centimètres at the upper part; it became wider from above downwards, and measured 12 centimètres in breadth at the lower part. The whole of the left pleura was tubercular to a high degree; the left lung was phthisical, and only as large as a man's fist, and was firmly adherent at the level of the first rib. The left lung was partly covered by pedunculated skin-flap taken from the thorax, in such a manner, however, that it remained accessible to local treatment. The left pleura was energetically scraped with a sharp spoon, and then stuffed with iodoform gauze. After a month's time, the left pleura, after repeated scraping with the sharp spoon, was converted into a cutaneous cavity by transplantation of skin, according to Dr. Thiersch's method. Local treatment of the left lung proved unnecessary in the further course of the case. The organ shrank together steadily more and more, and the tuberculosis, of which it was the seat, underwent a process of spontaneous cure in consequence of this shrinking. At the time of the operation the patient was becoming steadily weaker, and had no prospect but that of a speedy, certain death before him. Since his discharge, however, from the hospital, two years ago, he has remained quite well. He can attend to his business as a merchant as before his illness, and presents a blooming appearance, having gained much flesh. The left lung, entirely collapsed, can be felt in the upper part of the left side of the thorax, at the level of the first rib, behind the flap of skin, which partly covers it; it is quite inactive. The right lung is absolutely healthy; the heart is still displaced to the right side. The left pleura is a skin cavity, of the size of a man's fist, and covered with epidermis. In speaking and on deep inspiration, the mediastinum is arched to the left. At the lower part of the mediastinum—that is, the median wall of the skin cavity—the movements of the heart can be seen and felt. The strength and movements of the left arm are not impaired, but perfectly normal. The author recommends that in similarly severe cases of one-sided tuberculosis of the pleura and lung, the same procedure should be adopted as that carried out in the above case—the seat of the disease should be sufficiently exposed for local surgical treatment by free re-section of the chest-wall in front or behind. Unilateral tumours, also, of the lung and pleura may be best removed after the plan above indicated. The pleura and lung should be exposed by total or temporary resection of the chest-wall, or by resection of ribs, with division of the soft parts of the thorax in the direction of the lung; and then, later on, by a second operation, the diseased lung, which is by this time collapsed, should be removed, and the tumour extirpated or destroyed with Paquelin's thermo-cautery.

In conjunction with the record of the case narrated above, may be taken the notes of a case of enchondroma of the chest-wall, which appear in the same number of the *Journal of the British Medical Association.* The patient was under the care of Mr. F. Marsh, at the Queen's Hospital, Birmingham. She was twenty years of age, and a brushmaker by occupation, thus involving a considerable amount of shoulder movement of the pectoral muscles. Two years ago a lump began to form on her chest, just above the right breast. It was hard and painless. It slowly increased in size until a few months ago, before admission; but latterly it has grown more rapidly. The growth measured about three inches in its long diameter, was irregularly oval in shape, hard, slightly lobulated, painless, situated over the bony sternal ends of the third and fourth ribs, and firmly attached to one of them. The skin over the growth was normal, and perfectly moveable. Under an anæsthetic, the tumour was exposed by an oblique incision, the soft tissues were easily separated from it, and the projecting part cut off with a chisel and mallet. It proved to be an enchondroma (hard externally, but of soft consistence internally), attached to the third rib, a portion still being left wedged tightly in the third interspace, pressing the fourth rib downwards. On removing this portion with a gouge, it was seen that the growth expanded beneath the ribs into a mass the size of one's fist. The part of the rib from which the growth sprung was cut away, and so thin was the capsule, and so blended with the stretched pleura, that it was necessary to excise the implicated piece, measuring quite three inches by three inches. An irregular opening was thus left in the chest-wall, exposing the lung. As it was impossible to bring the edges of the parietal pleura together, the author sutured the soft parts together over the opening, placing a short, good-sized rubber drainage tube in the corner angle, in the event of pleuritic effusion. At the end of forty-eight hours, the dressings were changed, but were quite dry; and signs of pneumothorax being present, the drainage tube was removed, with relief to the patient, the wound being closed with strapping. A perfect recovery ensued. The wound was dressed throughout with dry boracic dressing.

M. Gelle read a paper recently before the Surgical Society in Paris upon a case in which he re-sected two ribs for the relief of an empyema, following an attack of typhoid fever. The patient was a man of twenty years of age. The empyema was first aspirated in the fifth intercostal space in the axillary line (? which side). A year afterwards, the discharge of pus through the fistulous opening still continuing, further measures were undertaken, and Estlander's operation performed. After having re-sected about seven centimètres of the fifth and sixth ribs, the author was obliged to cease operating, owing to sudden failure of the pulse. The abscess cavity was of very large size, and was washed out with a sublimate solution, two large drains being placed in position. The subsequent record of the case was without incident. Two months after the operation the thoracic walls began to retract, and complete cicacrisation soon followed. The author considered that the favourable age of the patient was the principal factor in the attainment of the good result.

In the *Semaine Medicale* for June 25th, some remarks occur upon the subject of pyloroplasty, or the surgical treatment of cicatricial contractions of the pylorus. A case is related in which M. Bardeleben performed the operation—the second he has done—successfully, the patient being a young girl, aged sixteen years. Perfect convalescence ensued, and the patient had gained thirteen pounds two months after the operation. The etiology of the cicatricial contraction is simple enough. Most frequently it is the result of the corrosive action of mineral acids which have been swallowed; again, cicatrices result from simple ulcers of the stomach, tubercular or syphilitic ulcers, and cause contraction of the pylorus. Again, sometimes pyloric contractions are congenital. The surgical procedures which can be adopted to relieve this condition are: Re-section of the pylorus, jejuno-gastrostomy, Loreta's operation, pyloroplasty, jejunotomy. For simple cicatricial contraction without adhesions to neighbouring parts, pyloroplasty is the best method. Excellent results can be obtained by its performance, while it is more simple and is more quickly done. Up to the present, fifteen cases of pyloroplasty have been recorded—Heincke, 2; Mikulicz, 2; Bardeleben, 2; V. de Hoeven, 1; Lauenstein, 1; R. Kochler, 1; Carle, 7; Novaro, 5. Of this number, there have been four deaths and eleven recoveries. The difficult question is to determine the precise moment at which to undertake the operation. There should be no hurry to operate when, as is often the case, the contraction of the pylorus has been brought about by the corrosive action of acids. Time should be allowed to lapse, in order to allow the tissues to become quite consolidated and healthy, lest the repair should fail to progress satisfactorily after the operation. No certain signs are known by which to recognise the most opportune moment for performing pyloroplasty.

Article 587.

THE ÆTIOLOGY OF DIPHTHERIA.

Little by little the difficulties surrounding an accurate understanding of the ætiological relationships of diphtheria are being removed in the light shed upon them as the result of investigations conducted by different observers in this country and abroad. That the disease is essentially dependent on the activity of a specific organism, of a *bacillus diphtheriæ*, is now well within the area of proof, the experiments of Klebs and Löffler going far to establish the certainty of this conclusion. The further elucidation of the problem involved in the isolation, cultivation, and observation of the effects produced by the diphtheritic microbe has, moreover, been undertaken by Dr. E. Klein, at the instigation of the Medical Officer of the Local Government Board; and, by permission of this official, Dr. Klein has been enabled to communicate the conclusions he has arrived at to a recent meeting of the Royal Society in London, and an account of the paper so contributed is contained in *Nature*, for May 29, 1890. The writer points out that the true bacillus diphtheriæ will produce, when injected into guinea-pigs, a tumour at the seat of inoculation, exactly resembling the diphtheritic tissue in human subjects; but that, as in the latter class of organisms, the microbe is found only in this situation, and not in either the blood or the viscera, lungs, intestine, or kidney, which exhibit indications of disease in diphtheria. A new factor in the chain of experimental reasoning is now introduced by Dr. Klein, who records that in cats also the same series of phenomena is observed to follow inoculation with diphtheritic virus. Bacilli are developed in profusion at the seat of injection, and degenerative changes are induced in internal organs as the effect of the poison developed at this site, but the distinguishing microbe is equally absent, save at the point of inoculation. With this experiment must be associated an observation severally made by independent health officers, and communicated to Dr. Klein, to the effect that a relation of cause and effect had been witnessed by them between cases of human diphtheria and a curious disease of cats, consisting of a pulmonary affection of an acute catarrhal description, attended with emaciation, and often terminating fatally. On *post-mortem* examination of the bodies of these animals, Dr. Klein found visceral changes similar to those already mentioned as occurring in the human subjects of diphtheria, and the identical nature of the disorganisation in the feline subjects, whether naturally or artificially infected, necessarily excites the enquiry, Whence do they derive it? The assumption that diphtheria in them is a disease of the lung was conclusively demonstrated by inoculation of their bronchial mucous membrane with bacilli cultivations from human diphtheria, the degenerations already described being subsequently found in them, and diphtheria bacilli present in large numbers in the muco-purulent exudation of the trachea and large bronchi.

Dr. Klein goes yet further forward in his demonstration, by describing the effects produced on cows by inoculation of the diphtheritic virus. The spot selected for the injection was the shoulder, and here a swelling developed, which after a few days declined, but, at the same time, the udders became the seat of an eruption exhibiting a definite series of progressive changes through the stages of papule, vesicle pustule, and scab, in successive crops; but the most important point to be noted is that the milk from such affected animals was actively virulent as a vehicle of diphtheritic contagium. It thus becomes clear that in the cow the bacillus of diphtheria passes from the seat of inoculation into the system, the chain of events being thus materially different from that obtaining in the human being, the guinea-pig, and cat, in which development of the microbe occurs only at the site of injection. It is especially suggestive, too, to learn that the udder eruption in the affected cows conveyed the contagion of diphtheria; and, indeed, the widespread bearing of these carefully-recorded observations and experiments, in relation to preventive medicine and public health, cannot be too generally appreciated.

So far the conclusions arrived at in these investigations are only briefly stated by their author, whose present communication takes merely the form of a record of experiments conducted with a view to the ascertainment of certain facts. Regarded as contributions to our knowledge of the etiology of a disease which is chargeable with no inconsiderable number of the deaths annually registered under the heading of zymotic diseases, it cannot be too seriously considered; nor is it possible to foresee how important an influence for good may henceforth be exercised through it. As preventive medicine is the highest development of modern science, so is the most perfect phase of it to be sought for under circumstances that limit disease and death within strictly natural barriers; and it is the power to effect such limitations that we may hope to derive from studies like those which are described above.

Chas. H. Wade.

Article 588.

BLOOD-LETTING IN CLINICAL MEDICINE.

Dr. Nascimbeni Ferruccio continues, in the *Gazzetta degli Ospitali* (Numbers 29, 30, 31, and 32), his studies on blood-letting. We have already given some account of the first parts of his essay in the Medical Recorder of May 20.

Considering the effects of venesection on the circulating fluid, he observes that it causes a greater diminution of the red globules than of the white corpuscles, because the former have a greater specific gravity. The proportion of red globules is gradually restored. Erb thinks that the white corpuscles lose their nuclei, and take on a red colour; some hold that the transformation of white into red corpuscles takes place in the spleen and in the medullary cavities of the bones. Hayem thinks that the red globules are formed from the hæmato-blasts bi-concave discs without nuclei, which originate from the white corpuscles of the lymph. The hæmoglobin is also diminished after bleeding. The author observes that the more rapid and dense coagulation of the blood after a second venesection is owing to the increase of the leucocytes. Schmidt has demonstrated that the fibrin of the blood is formed from two substances, fibrinogen and paraglobulin, under the influence of a special ferment. Ferruccio then considers the effect of bleeding as a remedy in different diseases. He has very little difficulty in showing the mischief done by the Sangrados of former times in using bleeding as a almost universal remedy. "Inopportunum sanguinis dispendium irreparabile tota vita debilitatem, et mortales quoque effectus produxet" (Folchi).

We are told that they used to bleed for the exonthemata, and during the cold stage of intermittent fever. Naturally Dr. Ferruccio considers, in some detail, the question of bleeding in pneumonia, this being the very battle-grouud between the advocates of phlebotomy and its opponents. Amongst the latter, he specially mentions Louis, Skoda, and Hughes Bennett. He tells us that from the statistics collected in the hospital of S. Spirito, in Rome, by Dr. Achille Bianchi, in 1878, the mortality from pneumonia was diminished after the use of heroic blood-lettings was discontinued. He quotes the opinion of Niemeyer, that venesection is beneficial when the pneumonia affects a robust and healthy person, when the temperature rises above 40 and the pulse above 120 beats. In this case venesection reduces the temperature and diminishes the frequence of the pulse. When there is collateral œdema in those portions of the lung not inflamed, venesection diminishes the blood pressure, checks the transudation of serum, and relieves the distress resulting from the deficiency of the lung surface. Other physicians whose views are cited consider bleeding a valuable remedy in pulmonary œdema, as tending to diminish the transudation of serum, and allowing the right ventricle to exert itself. A blood-letting, practised in time, in these cases sometimes saves life. In the Medical Congress, held at Rome in October, 1888, Maragliano said that the dangers of bleeding in pneumonia had been exaggerated, that he considered the remedy valuable in diminishing the *materia peccans* in the circulation. In this way bleeding may save life. Venesection may be used for pleurisy, and on the same indications, though leeches seem preferable. Formerly bleeding was much practised in apoplexy; now it is denied that any bleeding should be practised. Cantani, in a note to Niemeyer's Pathology, records his opinion that venesection should be used when the subject is robust, and the action of the heart continues to be strong.

A good many years ago, while a passenger in a sailing ship from Kurrachee to Bombay, I had thrown upon me the care of a gentleman who had been seized with apoplexy in his berth. He was a short, stout young man; the heart was beating strongly, but the breathing so laboured that he seemed in imminent danger of dying through asphyxia. I opened a vein, and bled him; the symptoms of pressing distress and danger at once disappeared, and all the pathologists that ever looked through a microscope could not convince me that this was not the best thing to do in the case.

Dr. Ferruccio quotes Broadbent, who recommended bleeding as very useful in acute nephritis, often causing the albumen to disappear. He himself observes in uræmia the value of blood-letting is indisputable. Ferruccio observes that he has seen this confirmed by what he has often witnessed in the clinique of Dr. Baccelli.

All these points were taken up by Dr. J. A. Macdougall, of Carlisle, in a paper on the "Remedial Value of Blood-letting," first published in the *American Journal of the Medical Sciences* for July, 1887. Dr. Macdougall pleads the utility of this prompt and powerful remedy in pulmonary œdema, suffocative catarrh, acute (scarlatinal) nephritis, and infantile convulsions, and illustrates his views with telling cases derived from his own experience.

Ferruccio also points out that blood-letting has been found of value in eclampsia, especially in those cases which are believed to be owing to the circulation of urea in the blood, which is transmuted into carbonate of ammonia. In conclusion, Dr. Ferruccio observes:—"In the history of medicine, it appears that phlebotomy has gone through many vicissitudes, passing from abuse to positive prescription. *Sit modus in rebus.* After so much controversy, the fact remains that venesection may be necessary in some contingencies. The question should be studied anew without preconception or partisanship. In medicine, as well as in other sciences, questions again arise which were believed to have fallen into total oblivion."

William W. Ireland, M.D.

Article 589

CAISSON OR TUNNEL DISEASE.*

In a recent number of the *Medical Record*, Dr. J. L. Corning publishes some interesting observations on the remarkable affection known as "Caisson" or "Tunnel Disease." Since Triger, a French engineer, first described the characteristic pains of the Caisson Disease in 1841, the affection has several times received attention at the hands of European and American physicians, who were in a position to observe it, in connection with diving-bell, bridge-building, mining, and other operations, where men are employed in an atmosphere of compressed air. The disease may be described as an affection of the spinal cord, due to a sudden transition from a relatively high atmospheric pressure to one much lower. Hence those who work in caissons or submerged tunnels, under an external pressure of two atmospheres, or more, are liable to be attacked by the disease, shortly after leaving the tunnel. The seizure never occurs while the subject is in the compressed air. Dr. Corning's observations were made on men engaged in the works of the Hudson River Tunnel, New York. At certain part of these works, an atmospheric pressure of from thirty-two to thirty-four pounds to the square inch is maintained, and it is on emerging thence that the workman experiences that portentous depression of the vital functions, which so often culminates in an attack of what he calls the "Bends," or, as we know it, the "Caisson Disease."

The manifestations of this peculiar affection are very various in character. There is, however, one symptom which is common to all cases, viz., pain.—The pain exhibits a predilection for certain regions of the body, notably for the knees, the elbows, the epigastrium, the deltoid and lumbar muscles, and the ears. As already stated, the pains do not come on while the subject is in the condensed atmosphere, but from twenty minutes to a half-an-hour after he has left the tunnel. During his sojourn in the tunnel, he experiences no special inconvenience; he may on the contrary affirm that he "never felt better in his life." If we examine him at this time we find that his pulse is strong and rapid, say from 120 to 140; his skin is warm and moist; he performs such acts as climbing and lifting with less difficulty, especially as regards breathing, than under normal atmospheric conditions. After three or four hours, however, he begins to experience marked sensations of fatigue. He leaves the tunnel at the end of his four-hours' shift, his exit being effected through an "air-lock," a small chamber, from which the compressed air is allowed to escape slowly. The process of "locking out," as it is termed, is accomplished very gradually, ten minutes or more being consumed in the operation. This precaution is found to be very important. The subject of an attack, very shortly after entering the normal atmosphere, suffers from a sense of prostration; his skin is cool and covered with a clammy sweat; his pulse, compressible and slightly irregular, has fallen to 60; his gait is slow and hesitating. After about half-an-hour, or less, he is seized, suddenly, with pains in the lower limbs, of such violence as to cause him to fall to the ground, or sink on the nearest door-step, and he has to be carried to his home, or the hospital. The face wears a pinched, haggard, wistful appearance, which is quite characteristic of this early stage of the disease. The pains are usually excruciating, and are often described as of a "burning" or sawing character. Sometimes they predominate in the knees, sometimes they are more marked in the abdomen. Sometimes they are severe in the back and arms, more especially in the elbow and shoulders. The advent of pains is often marked by prodromic symptons, such as a terrific buzzing in the ears, or other unpleasant auditory sensations.

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* *Medical Record*, N.Y., May, 1890.

Profound impairment of sensation and motion may be present in severe cases. The zone of anæsthesia varies. Sometimes it extends up to the knees, sometimes it involves the thighs as well, and it may include the lower part of the trunk. As a rule the region just above the zone of anæsthesia is hyperæsthetic. Bladder and rectal symptoms are not uncommon. There may be vesical paralysis, and severe tenesmus, and difficulty may be experienced in evacuating the bowels. Sometimes urine and fæces are evacuated unconsciously, owing to impairment of sensibility of the bladder and rectum. Trophic disturbances, in the form of bed-sores, are not uncommon in the severer cases of caisson disease, resembling the malignant type occurring in the course of acute myelitis. A slight rise in temperature to the extent of 1° F., or more, is not uncommon. Severe cerebral symptoms are relatively rare. When they do occur the case generally terminates fatally, the patient dying in profound coma. Slight cerebral symptoms, such as attacks of vertigo, headache, difficulty in talking consecutively (functional aphasia), and diplopia, are not uncommon. Cases of minor severity usually recover in from one to two weeks, or less; those of a graver type require much longer before the patient is restored sufficiently to get about. The prognosis in ordinary cases is good, many of the patients being able to return to their work soon after getting about. A previous attack affords no immunity, but on the contrary the individual is more susceptible, a subsequent seizure being certain to prove more severe than the first. It has already been stated that the attack does not occur as a consequence of a prolonged sojourn in highly condensed air, but as a result of an *abrupt transition* from an atmosphere of relatively high density to one more rarefied. It is known that æronauts, after a rapid ascent, are sometimes attacked in the lofty regions of the air, where the barometric pressure is relatively low, with symptoms in all essential particulars like those of the caisson disease. Similar phenomena may be induced in animals experimentally by exposing them in suitable apparatus to air of corresponding rarefaction. (Ueber die wirkung der Verdünnten Luft auf den Organismus. By A. Fränkel and J. Geppert, Berlin, 1883.) The physiological *modus operandi* appears to be this:—The diminution of the pressure at the periphery causes the blood to rush in unwonted quantity to the surface, with consequent deprivation of the internal organs of a large amount of blood. This anæmia will make itself felt in the lower segments of the cord first, for the reason that the arteries which supply this region are at once long, slender, and remote from the heart. Only when the rarefaction is very great, will the cerebral functions be affected. Hence motor and sensory paraplegia precede unconsciousness. Dr. Andrew H. Smith—("The effects of High Atmospheric Pressure including the Caisson Disease," Brooklyn, 1873)--gives a somewhat different interpretation of the phenomena of the caisson disease. He lays down that under high atmospheric pressure the parts at the periphery are rendered anæmic, while the internal parts, especially the structure enclosed within bony cavities, are congested. On removal of the high atmospheric pressure, the vessels will be in a state of relaxation, not only in the congested but in the anæmic parts; in the former because of the previous over-distension, in the latter because the muscular coat cannot at once recover from its inaction. There will, therefore, be a general lowering of vascular tension, and the congested parts will not readily empty themselves of the excess of blood which they contain. Especially will this be the case in the brain and the spinal cord, and hence arise disturbances of function.

The morbid anatomy of the disease has not been very thoroughly worked out, at present. Leyden and F. Schultze found "a disseminated but extensive affection of the dorsal cord, chiefly in the posterior columns, and in the posterior portion of the lateral columns. The nervous tissue in the diseased parts was completely destroyed, and instead of it were found detritus, and a collection of large, round, fine, granular cells." In the treatment of the disease most observers recommend morphine at frequent intervals for the relief of the pain. Ergot has also been given with apparent benefit, and cold applications and douches to the spine proved beneficial in Dr. Andrew Smith's hands. Unquestionably, however, the best of all remedies is to return the patient as quickly as possible to the condensed atmosphere. This is not always possible, owing to the inaccessibility of the caisson, and the feeble condition of the patient. It has, therefore, been proposed to construct, at some convenient point above ground, a chamber in which the patient could be placed, and the air condensed so as to nearly equal the pressure of the caisson. The pressure could then be reduced by degrees, carefully adjusted to the effects produced, until the normal standard was reached. By occupying several hours, if necessary, in the reduction of the pressure, it is probable that a return of the pain could be avoided. For the prevention of the disease it is important that the workmen should not remain many hours at a stretch in the caisson; short shifts are therefore essential. Moreover, both engineers and physicians agree that a longer time should be consumed in the process of "locking out," so that the transition from the condensed to the normal air should be as gradual as possible.

JAMES B. BALL, M.D.

ARTICLE 590.

SYPHILIS AS AN INFECTIOUS DISEASE BACTERIOLOGICALLY CONSIDERED.[*]

THE following is a *résumé* of a "critical-historical" article, by Dr. Finger, in the *Archiv. für Dermatologie und Syphilis*. 1890, Heft, 3:—

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[*] By DR. ERNEST FINGER, Docent for Dermatology and Syphilis in the University of Vienna.

In the study of infectious diseases, two facts appear to be established—(1) That it is not the direct excitants of the disease which cause all the symptoms, but the ptomaines produced by them; (2) the fact that immunity is acquired in more or less degree. We must therefore consider separately (*a*) the local symptoms, caused by the virus; (*b*) the general symptoms, caused by its chemical products in the tissues; (*c*) the subsequent protection afforded to the body against the same infection.

Now, as regards syphilis, we have not yet obtained and inoculated into animals cultures of its specific bacilli; hence, in attempting to frame theories on the subject, we enter on the broad path of hypothesis. The aim of the present article is to bring again into prominence some important questions which have been gradually dropping out of sight during the last ten years.

I. Primary Stage.—The immunity against further syphilitic infection, which immunity ultimately prevails over the whole body, is at first localized, viz., in the neighbourhood of the primary lesion. But that, even in the primary period, the virus has begun to permeate the organism, is shown by the author's case of syphilitic efflorescence in the popliteal space on a portion of skin which had been irritated, two weeks before the general eruption; also by Lang's observation of macules and papules, the epithelium being intact, in the neighbourhood of the primary lesion. *The general symptoms.*—First comes a very gradual chloranæmia, then fever, depression and languor, pains in the joints and limbs, with nightly exacerbation, temporary albuminuria (Horteloup), slight and short icterus (the author), alterations of reflex excitability (Lechner, Bergh), wandering neuralgias, attributed by Lang and Schnabel to hyperæmia of the pia mater. All these are intoxication phenomena; they are too ephemeral and changing to be ascribed to localizations of the virus. Here we are met by the striking fact that, against the sclerosis and glandular swelling of the primary stage, mercury is extremely potent, iodine inoperative; while, in the eruptive period, iodine has by far the more intense action of the two. This is especially shown in its relief of pain.

II. Secondary Stage.—The various eruptions on the skin and mucous membranes are caused by local deposits of the virus. Their virulence proves this; but a great many of the so-called secondary symptoms are of intoxicative character, being due to tissue products passing into circulation, and causing a general, often severe, nutritive derangement.

Baudoin and Morel-Lavallée have called a form of secondary syphilis, with very slight eruptions, but with very severe general derangement, "denutritive secondary syphilis." In such cases there is rapid emaciation, anæmia, and hectic fever. The tissue products of the virus are in such cases either formed in excess, or the individual is more intolerant of them than usual. In *syphilis maligna* (*præcox*, *gravis*) not only the tissue products, but the local foci of the virus reach their acme.

After the second stage comes a long stage of latency—for many a period of cure, for others only an interval between the second and third stages. That the virus still exists in the body is shown by recent cases of Landouzy (Congrès International de Paris, 1889) and Hardy (*ibid* et *Semaine Méd.*, Sep. 18, 1889); also by its hereditary transmission. The general health is not perfect.

III. The immunity against fresh infection is the chief characteristic of the above latent period. We do not know how long it lasts, but its duration is certainly limited, in some cases, at least, as the undoubted cases of re-infection show. The immunity, as mentioned, began even in the primary period. It is an immunity only against fresh virus. The first virus that caused the infection may still cause relapses; but V. Zeissl is quite mistaken in asserting that the fact that the patient cannot be re-inoculated is a proof that he is still syphilitic. The negative consequence of inoculation only shows that the patients are immune, not that they are still syphilitic. Otherwise, we might say that a patient has small-pox still in his system years after surviving an attack, because he is proof against fresh infection with small-pox virus.

It has been said above that the immunity in the primary stage is due to tissue products of the virus in the circulation, the infected foci being still strictly localized. In support of this, there is the undeniable fact that, under certain conditions, persons may acquire immunity against syphilis without passing through its stages. Hereditary syphilis teaches us this. Kassowitz (1876) declared the placental vascular wall an impassible layer for the virus animatum of syphilis, as for all corpuscular elements; hence, post-conceptional infection of the mother could not be transmitted to the fœtus, nor could a fœtus syphilitic through the father infect the mother. The incorrectness of the above has been shown by cases of M. v. Zeissl (*Allg. Wiener Med. Zeitg.*, 1879), Vadjav (*Wiener Med. Presse*, 1880), Behrend (*Berliner Klin. Wochensch.*, 1881). But in other infections also, the virus, *i.e.*, corpuscular elements, have been shown to pass. Neuhaus (*ibid.*, 1886) found typhoid bacilli in a four-months' fœtus, the mother having typhoid fever. Chantemesse and Vidoe (*Archiv. f. Physiol.*, 1887) report similarly as regards inoculated guinea-pigs. Tizzoni and Cattani obtained cholera cultures from a five-months' fœtus, the mother having died in the third day of cholera (*Centralb. f. d. Med. Wiss.*, 1887). Malvoz inoculated four gravid rabbits with anthrax bacilli, and out of the thirty-two fœtuses found the same bacilli, as proved by inoculation and cultivation (Brussels, 1887, "Sur le Mecanisme, &c."). The author adds many more instances.

Moreover, Kassowitz speaks only of a *virus animatum*, making no mention of its specific tissue products. These have to be taken into account in explaining the two following kinds of immunity from syphilis:—(1) Colles's immunity; (2) Profeta's immunity. By Colles's immunity is meant that which is shown by those healthy mothers who, owing to latent syphilis in the father, have borne syphilitic children, but have themselves escaped infection. This immunity has been proved in thousands of cases, and there is no longer any doubt that it may exist. Caspary and Neumann even inoculated without result, also the author thrice. The immunity in such cases is due to tissue products of the syphilitic virus which have passed from the fœtus by diffusion into the maternal circulation, causing immunity from syphilis without the symptoms of syphilis. It is true, exceptions are published, but they are few. Profeta's immunity ("le loi du Profeta"; Fournier) is the immunity of the children of syphilitic parents (either or both being syphilitic). The children in many such cases are healthy born, and remain healthy, but some of them are proof against the contagion of syphilis, just as if they had had syphilis. Diday said, in 1883: "Si donc, au moment on vous avez procreé un fils, vous vous trouvez bien gueri, à la période où l'immunité syphilitique est acquise, votre fils participera à la même immunité. C'est un heritage comme un autre, me disait à ce sujet Ricord." This immunity is also due to tissue products of the virus passing into the fœtal blood, the virus itself not passing.

In fact, all immunity from syphilis (and the same holds with all other infectious diseases) is due to the "tissue products" of its organised virus passing into the circulation; for (1) this immunity occurs even in the primary period; (2) it outlasts the period of activity, and even of the presence of the virus in the body; (3) it can be transferred independently of the virus itself. How this immunity is to be explained essentially is, however, still an open question. The theories of exhaustion, of retention, of Metschnikoff, do not suffice. The chemical contact theory of Liebig seems most agreeable. A minute quantity of oxalic acid, *e.g.*, suffices to change an unlimited quantity of oxamide into oxalic acid and NH_3.

IV. Tertiary Stage.—There is, and has always been, a general disposition to regard this stage as an abnormality, not, in strictness, etiologically connected with the two previous stages. The older writers mostly ascribed it to the use of mercury in these stages. More modern observers speak of it as a cachexia, a local disease outlasting its specific cause (Ricord), an infectious disease become a diathesis (Diday), a disease caused by various influences cooperating with syphilis (Langlebert), the product of a syphilis modified by mercury (Bärensprung, 1864), a sequela of syphilis not syphilitic itself (Gascoyen, 1874), a peculiar reaction of the organism (Kassowitz), &c., &c. (Neisser, Hutchinson, Finger). For tertiary phenomena are relatively rare; they appear very late after infection, the type of the disease is altered, and the products are not contagious (the non-contagiousness has been abundantly proved, both clinically and experimentally; two doubtful cases have occurred recently (Landouzy et Fournier, Congrès Internat. de Derm., Paris, 1889), but the mass of evidence is against contagion). Further, the tertiary stage is not transmissible by inheritance. Individuals in this stage are susceptible of fresh syphilitic infection (Gascoyen's 6 cases, Merkel's 1, Duevey's 1); this stage reacts differently from the second period to chemicals (I. Hg.); and, lastly, tertiary symptoms, like immunity against syphilis, may arise in persons who have never had primary and secondary syphilis. Amongst the latter persons are many mothers who have borne children syphilitic by the father; also the children of syphilitic parents. In this latter case, we find, apart from severe syphilis at birth, or soon after, severe nutritional derangements, and the appearances of inherited syphilis, with purely tertiary symptoms (Hutchinson, *Syphilis*, 1888; V. Zeissl, Behrend, Vajda). In fact, tertiary symptoms are not due to the syphilitic virus *per se*, but to its tissue products; and this explains how it is that syphilis inherited from the mother is so much more severe than when inherited from the father. The power of iodine in tertiary, of mercury in secondary syphilis, has been already mentioned. A moderate amount of tissue products of the virus (or only slight virulence, or greater resistance of the body) causes simple immunity; an increased amount of morbid products of the virus, or their greater virulence, causes tertiary syphilis.

E. J. Edwardes, M.D.

There are forty-seven medical colleges in the United States open to both sexes.

Article 591.

OTTO SCHEFFELS ON RESECTION OF THE OPTIC NERVE.*

Although some points in connection with sympathetic ophthalmitis have been cleared up by Deutschmann's well-known experiments, many, and the author among them, have hesitated to adopt the conclusions which have been drawn from them, from a belief that the questions at issue cannot be settled by experiments on animals, but only by the results afforded by clinical investigation.

The author believes that if the optic nerves are really the channel through the medium of which the second eye becomes affected (whatever the nature of the infecting substance may be), then early and efficient resection of the optic nerve should be capable of affording it absolute protection.

If, after a properly performed resection, sympathetic inflammation occurs in only a single instance, he considers that this theory will have received a blow from which it could hardly recover.

On the other hand, if in 1,000 cases, in which experience tells us sympathetic inflammation would be likely to occur, it does not do so after an efficient resection, then it might, he thinks, be held to be almost considered proved that sympathetic inflammation is always excited through the medium of the optic nerves, and that resection is a sure preventive.

We are far, at present, from having obtained the required proof; for, with the exception of Schweigger's paper in Graefe's Archives for 1885, on "Resection of the Optic Nerve," there is no published account of extensive results of this operation. The author therefore thinks that the results of 41 such operations, performed in the Wiesbaden Augenheilanstalt, will be of interest in themselves, and may lead others to record their experience. The operation has been practised by Pagenstecher for about seven years, having been adopted solely for clinical reasons, with the object of finding an efficient substitute for enucleation.

At first he practised neurotomy, an operation that had previously been performed by the late Alexander Pagenstecher. But this was subsequently replaced by excision of the nerve, to avoid reunion.

In the early days the operation was only practised in cases in which the blind eye was a direct source of trouble, but in course of time the good results led to its extension to cases in which there was a fear of sympathetic inflammation. A still further step was the extension of the operation to cases in which a foreign body was retained in the eye.

The author then gives a detailed account of the cases; we must content ourselves with a mere summary of the salient points.

In 15 cases the operation was performed for the relief of symptoms immediately dependent on the blind eye, as pain, recurrent inflammation, etc. In seven of these there was also sympathetic irritation of the other eye, which was relieved in all. In the remaining 26 it was performed to prevent the occurrence of sympathetic ophthalmitis. In four of these there was phthisis bulbi, from an old perforating lesion, traumatic or otherwise, and recent inflammation. In the remaining 22 there had been a recent perforating wound, eight of them being cases of retained foreign bodies.

The operation itself is fully described. The chief points are that the internal rectus is divided, the globe drawn forwards and outwards, by a double hook passed as far back as possible, and fixed in the sclerotic; the nerve thus placed on the stretch is felt for with the closed scissors, the blades are then separated, and the nerve divided as far back as possible; the globe is then rotated further forwards by means of the hook, and the nerve seized by an assistant, and dragged out of the wound. In this way the posterior surface of the globe is brought into view. The nerve is then cut off close to the sclerotic, and the posterior pole being cleaned as much as possible, the globe is then replaced, and the muscle and conjunctiva sutured. It is stated that the slight proptosis that occurs generally disappears in four or six days, even when the bleeding has been unusually free. In only one case did the proptosis give any trouble; in this the globe could not be reduced at the time of the operation, notwithstanding it had somewhat collapsed, owing to a leakage from a glaucomatous cup that extended into the nerve and was opened. The cornea sloughed. The sensibility of the cornea was restored in some cases within two weeks, but usually it was later. The operation often did not take longer than from three to four minutes. The longest piece of the nerve excised was 15½ mm. Half this amount, however, the author considers sufficient; for, considering how difficult it is to find the stump of the nerve even after an ordinary enucleation, it is difficult to believe that the nerve can re-unite even after five mm. have been excised, although it has been proved to have done so after a simple division. For this reason simple neurotomy must be abandoned as a preventive of sympathetic ophthalmitis. Leber has, moreover, recorded a case in which this occurred after the operation; and although there are some elements of uncertainty in this case, one recorded here, in which the operation was performed on the 16th day after the injury, leaves no room for doubt; for the second eye did not develope symptoms till 95 days later—too late therefore for it to be accounted for by the mischief having already passed beyond the point of section.

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* *Klin. Monatsbl. für Augenheilkunde*, June, 1890, pp. 197-250.

The non-occurrence of sympathetic inflammation in the 26 cases does not, the author admits, prove much, as we may have no absolute means of measuring the probability of the occurrence of sympathetic inflammation in a given case. On the other hand, its occurrence after the operation in a case recorded by Clausen, does not disprove of its value as a preventive, since the interval between the operation and the appearance of the symptoms—thirteen days—is short enough to be consistent with the mischief having already extended beyond the excised portion.

The author then passes to a consideration of the pathology of sympathetic ophthalmitis, and remarks that in doing so we necessarily leave the sure foundation afforded by clinical facts for the less secure ground of theory.

Even if we admit the accuracy of Deutschmann's claim to have set up inflammation in the second eye of a rabbit, by injecting pyogenic micrococci into the vitreous of the other eye, and allow that the micro-organisms reached the second eye by continuous propagation along the optic nerves and chiasma (which is denied by Randolph), it still has to be shown that the inflammation produced had anything in common with sympathetic ophthalmitis as it occurs in the human subject. Who (asks the author), calling to mind the typical picture presented by this affection, its peculiar tendency to the formation of extensive synechiæ and membranous exudation, its absolutely unique features, and also the fact that it never occurs when the other eye is healthy, can believe that it can be excited by a pyogenic coccus? and if this is really the exciting cause, how is it, he asks, that out of the immense number of cases that have been recorded, suppuration has never occurred? Deutschmann's explanation that the character of the micrococci is changed during their passage, the author rejects as fanciful.

Deutschmann believes that the fact, that he found raised pyogenic cocci from portions removed from eyes which had been excised because they were thought likely to produce sympathetic inflammation, supports his theory; but the author points out that this is of no value unless it can be shown that this was not the case also with eyes removed for other reasons. The absence of meningitis in the human subject in sympathetic affections, and in its presence in rabbits, is also commented on, as it has been by others.

As a record of a considerable number of neurectomies, this paper is of great interest, and the objections to Deutschmann's conclusions, though by no means novel, are forcibly stated; but when the author comes to attempt to state his own views, he flounders so hopelessly that we are driven to the conclusion that he has none. He admits that Deutschmann deserves credit for demonstrating the anatomical possibility of transmission by the optic nerves, and his advocacy of neurectomy is based upon the view that this is the only channel. He admits that septic inoculations of the first eye is an essential factor, but suggests that a chemical septic material is the irritating agent for the sympathising eye. Finally, he thinks it in the highest degree improbable that there is only one channel of transmission, and suggests that there may be communicating lymph channels between the anterior parts of the orbits, so that he himself cuts away the sole justification for neurectomy.

W. Adams Frost.

Article 592.

DOWNS ON CHEYNE-STOKES BREATHING, WITH A CASE OF RECOVERY AFTER SIX DAYS' DURATION.*

The well-marked alteration in respiratory rhythm known as Cheyne-Stokes breathing is one of interest and of comparative rarity, considering the number of diseases in which it may occur. For some time after its description by Dr. Stokes, in 1846, this phenomenon was considered pathognomionc of fatty heart. It is now the generally-accepted opinion that the condition may occur in all affections involving the cerebral and medullary centres. Minor degrees of irregularity are often spoken of as *cerebral* breathing, and they may accompany exalted or depressed conditions of the brain functions. True Cheyne-Stokes rhythm, however, occurs only when depression is present. As to the gravity of the symptom, it is probably always of fatal significance in tubercular meningitis and fatty heart. Instances of subsequent recovery have been reported in other diseases, such as Bright's, and also in injuries to the head.

The case reported by Dr. Downs was that of an Italian, 40 years of age, who walked into the Pennsylvania Hospital showing marked Cheyne-Stokes respiration. No family or personal history could be obtained, as the patient did not speak English. The chief points are as follows:—"M. F. admitted Jan. 22, 1890. Temperature, 98°. Pulse at wrist scarcely perceptible, something over 120. Respiration typically Cheyne-Stokes. Face intensely cyanosed. Entirely conscious. Tongue, coated and tremulous, protruded without difficulty, but slightly to the right. Eyelids, œdematous. Pupils slightly contracted, acting feebly to light. Heart's action regular, feeble, sounds faintly audible, without murmur. Cardiac dulness not increased. Lungs everywhere filled with coarse mucous râles. Area of splenic dulness slightly increased. Legs and thighs œdematous. The patient was immediately catheterised, and four ounces of muddy urine obtained; it had a specific gravity of 1030: alkaline reaction; fully three-fourths of albumen, by bulk, and a large number of epithelial, granular, and hyaline casts, with free blood, mucus, and triple phosphates. He was given hot whiskey and water, followed ten minutes later by 30 minims of extract of jaborandi and 30 grains of compound jalap powder. One hour later patient was in a profuse sweat, which had the characteristic urinous odour; the bowels were also freely moved. The jaborandi and the jalap, in the same doses, were repeated during the afternoon, and acted well on the skin and bowels. *Evening.*—Temp. 100°. Cheyne-Stokes respiration continued. No convulsion or stupor. *Jan.* 23.—Respiration unaltered. Patient slept most of night. Quite conscious, and takes nourishment well. Given a drachm of infusion of digitalis, and ten grains of acetate of potash every two hours. Jaborandi thrice daily, and jalap as wanted. Passed six ounces of urine during night. Has sweated profusely all day. Hot-air bath at night. *Jan.* 24.—Respiration unaltered. During twenty-four hours passed eighteen ounces of alkaline urine; sp. gr., 1024: albumen, three-fourths by bulk. *Jan.* 25.—Respiration unaltered. Fifty ounces of albuminous urine. Pulse improving; heart stronger; râles gone from lungs. *Jan.* 26.—Respiration unaltered. Urine for twenty-four hours, eighty-two ounces, pale, half albumen by bulk; sp. gr., 1016: casts diminished in number. Patient has been sweating and bowels have been moving freely each day, while œdema is fast disappearing from legs. *Jan.* 28.—Cheyne-Stokes breathing absent this morning for the first time since admission. Temperature for last few days subnormal. Cheyne-Stokes respiration returned at night. *Jan.* 30.—Respiration natural. Tongue still protruded to right. Fifty-three ounces of alkaline urine; sp. gr., 1016: one-fourth albumen; no casts. *Feb.* 2.—Digitalis stopped. Thirty-two ounces of urine; sp. gr., 1018: trace of albumen. *Feb.* 24.—Urine, one month after admission, entirely free from albumen and casts."

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* *Philadelphia Medical News*, May 31 1890.

The writer remarks that it was impossible to say how long the Cheyne-Stokes breathing had existed before admission, but it occurred for six days continuously while in hospital, during which time the patient was entirely conscious, taking his nourishment without assistance, and, seemingly, not in the least inconvenienced by his altered respiration. During the period of apnœa, which, by many counts, was found to last from thirty to forty seconds, the face became intensely cyanosed, the heart's action slightly slower, the eyes more prominent, but complete consciousness preserved. When in the period following, or that of dyspnœa, the heart's action quickened somewhat, while a general sense of discomfort prevailed. This stage lasted, on an average, seventy to eighty seconds. In neither stage was alteration in the state of the pupil noticed, although carefully looked for. This eye condition has been closely watched by many observers, and several of them report contraction and dilatation occurring synchronously with the stages of apnœa and dyspnœa. Dr. Alex. Robinson (*Lancet*, 1886) reports two cases of apoplexy, and says that "during the period of dyspnœa the pupils became widely dilated, and, at the same time, the extremities became rigid, while during the stage of apnœa the pupils contracted firmly, and the muscular rigidity passed away." The author mentions various theories which have been advanced. For instance, Traub, who suggested a diminished excitability of the respiratory centre, requiring, therefore, more carbonic acid in the blood to excite it to action. Landois and Stirling state that the phenomenon may occur wherever the blood itself, or the normal supply of blood to the brain, is altered. Pepper believes it is due to an impaired excitability of the respiratory centre. Bramwell, who goes into the whole subject very thoroughly, cannot see that any of the theories yet advanced exactly accounts for the symptoms, and adds that further elucidation of the subject is necessary before a correct solution is attained. Fatty degeneration of the heart is found in a large number of instances, while atheroma of the aorta, or aortic valves, contracted granular kidneys, tumours of the brain, etc., are found in others. Edes (*Boston Med. Jour.*, 1879) mentions four cases in one family, which may show a neurotic predisposition. The phenomenon may last forty days, or more, and very frequently disappears during the course of a disease, to return at irregular intervals. Its occurrence is enough to make the prognosis exceedingly grave. On the other hand, several cases of recovery have been reported.

David Walsh.

Article 593.

SHOULD DENTISTS BE QUALIFIED MEDICAL MEN?

The subject of medical qualifications for dentists is one which is being frequently discussed, especially by dentists. There are two schools in the dental profession with regard thereto; one which holds that every dentist should be a fully qualified man, and the other that medical, as distinguished from dental, diplomas are quite unnecessary for the dentist. In taking an impartial view of the question, it is impossible to dispute that there is much to be said on both sides; and in the first place, let us consider briefly the arguments in favour of the opinions of those who believe that all dentists should be men qualified by law to practice medicine. The belief is prevalent in the minds of some that dentistry should be regarded merely as a special branch of surgery, and that dentists should in other words be medical men, not only qualified to practice the medical profession, but specially qualified also to practice dentistry, to which, as a speciality, they confine their attention. The effect of this would be, it is stated, to raise the *status* of the dentist, both professionally as well as with the public. No doubt this argument is sound as far as it goes; and if it were compulsory that every dentist should qualify in medicine, the speciality of dentistry would be placed upon the same footing as that of other specialities, such as of the eye, throat, ear, and so forth. This appears to be the main reason which can be urged in support of the contention that dentists should be fully qualified medical practitioners. We believe, however, that a little inquiry into the matter reveals certain objections, the validity of which cannot be gainsaid. In the first place, dentistry can scarcely be regarded as being on the same footing as other departments of the healing art. There is, for example, nothing comparable in the medical curriculum proper to the "bench work," lasting from three to four years, to which the dental student has to devote his attention. The dental course includes the expenditure of much time upon the acquisition of all the mechanical details of the art. A medical student, on the other hand, is not required by the examining bodies to explain, demonstrate, and describe the manufacture of, say, an artificial limb for a patient after amputation; nor is a surgeon ever called upon to make for a patient, whose leg he has amputated, an artificial substitute, while any mechanical work that he has to do, confined mainly to the fashioning of splints, is of the simplest description. Again, we presume the aim of students who study dentistry is to become efficient dentists; but how is it possible for them to attain this end if the bulk of their time —as would necessarily be the case—is occupied in working for a medical qualification? The medical curriculum has now been extended to five years, and the General Medical Council has been good enough to point out how the medical student must spend this period of his pupilage. But supposing, for the sake of argument, that a dental student does obtain a medical qualification, of what possible advantage can it be to him? His knowledge of medicine, at the time that he would cease to study it, would be of the most immature description; he would necessarily never seek an appointment by which he would be able to utilise his qualification, and so gain experience of his profession; he has adopted the calling of a dentist, and to this object in view everything has to give place as soon as he has passed his student stage. Thus, it is difficult for us to believe that, practically, a student desirous of becoming a dentist can with justice to himself add, to the demands of his special course, the severe requirements of the general medical curriculum. It seems to us that if he attempts both courses, either one or the other must be neglected. The value of a medical man is, of course, intimately connected with the knowledge he possesses of his profession, and the same is true of the dentist. Of what advantage, then, to a dental student can be a qualification, which is inclusive of midwifery, which he will never practice—of surgery which he will never see—of medicine, of which all knowledge will rapidly pass from his mind? The public, we presume, are perfectly indifferent about the fact of a dentist possessing a medical qualification. A dentist's special work is confined to the teeth, and this honourable branch of the healing art demands men of special aptitude and skill for its satisfactory fulfilment. We cannot see that a dentist with a medical qualification is in any way more fitted to practice his art by the mere possession of that qualification. His own special curriculum endows him with all the small details of medical knowledge, necessary for the carrying out of his work. There is, however, one weak point in the system of dental education—and that is the absence of a higher diploma in dentistry. The difficulty is met now-a-days by the efforts of dentists with medical qualifications to attain the Fellowship of the College of Surgeons. But how can this diploma be considered to confer any higher qualification upon a dentist? This question has always been a difficulty to us. How can a dentist with the Fellowship of the College affirm that he is, *ipso facto*, better qualified in dentistry than he was before the accomplishment of this undertaking? Strictly speaking, it is hard upon dentists that they should be compelled to travel so far-a-field in order to obtain something more than a mere qualifying diploma. The L.D.S., for example, of the College of Surgeons is, in truth, nothing more than a diploma of this nature, and stands in a similar position to the M.R.C.S. The L.D.S. cannot be said to be a distinctive diploma for dentists, because most dentists in England, we take it, obtain the qualification. Hence, all dentists in this regard are placed on the same footing. For the benefit, however, of men practising dentistry who have higher aims, and are desirous of winning collegiate distinction, a higher diploma should be instituted. What could be more in keeping with the present aspect of affairs than the inauguration of, say, a Fellowship in Dental Surgery, represented by the letters F.D.S. of the Royal College of Surgeons? The curriculum for the attainment of this diploma would, of course, be more comprehensive than that for the L.D.S., and the examinations would be more stringent; and there would doubtless be a great impetus imparted to the education of the dental student, by the institution of such a distinction. We commend this suggestion to those whom it may concern, and are sanguine enough to believe that the carrying out of this scheme would do more for the dental profession than the policy of urging all dental students to obtain medical qualifications.

Anatomy and Physiology.

RECENT PAPERS.

594. Belakoff, Dr. Ivan V.—On the Influence of Digitalis and Nitrate of Potassium on the Metamorphosis of Chlorine, Phosphorus, and Sulphur in Healthy People: A Clinical Contribution to the Study of Diuretics. (*St. Petersburg Inaugural Dissertation*, 1890, No. 72, p. 47.)

595. Atlasoff, Dr. Ivan I.—On the Influence of Digitalis and Nitrate of Potassium on the Elimination, Assimilation, and Metamorphosis of Alkalies (Potassium and Sodium) and Alkaline Earths (Calcaria and Magnesia): A Clinical Contribution to the Study of Diuretics. (*St. Petersburg Inaugural Dissertation*, 1890, No. 42, p. 77.)

596. Draishpul, Dr. Khaim I.—On Invisible Perspiration and Arterial Tension in Children. (*St. Petersburg Inaugural Dissertation*, 1889, No. 26, p. 72.)

597. Heitzman, Dr. L. -On the Fine Structure of the Normal Skin. (*Arch. für Derm. u. Syph. Jahrg. XXII. Hft.* 1, *u.* 2, *S.* 3.)

598. Smith, Prof. F.—On the Histology of the Skin of the Elephant. (*Journ. of Anat. and Phys.* Vol. xxiv., p. 493.)

599. Strahl, H.—On the Growth of the Placenta of the Dog. (*Arch. für Anat. u. Entwick. Jahrg.* 1890, *Hft.* 3, *u.* 4, *S.* 185.)

600. Mollier, S.—On the Origination of the Pronephric System in Amphibians. (*Arch. für Anat.. u. Entwick. Jahrg.* 1890. *Hft.* 3. *u.* 4, *S.* 209.)

601. Seiler, H.—On the Development of the Conjunctival Sac. (*Arch. für Anat., u. Entwick, Jahrg.* 1890, *Hft.* 3, *u.* 4, *S.* 236.)

602. **Kollmann, Prof. J.**—On the Development of the Human Notochord. (*Anat. Anzeig. Jahrg.* v., No. 2, s. 308.)

603. **Sabouraud, R.**—On Complete Cleft Palate. (*Bull. de la Soc. Anat. de Paris*, 1890, p. 270.)

604. **Fere, Ch.**, and **Perruchet, E. V.**—On the Thoracic Circumference and Vital Capacity of Epileptics. (*C. R. de la Soc. de Biol.*, May, 1890. *L'Anthropolgie, T. I.*, No. 3, p. 327.)

605. **G. Pisenti and G. Viola, Profs.**—A Contribution to the Normal and Pathological Histology of the Hypophysis, especially as regards the connection between the Brain and the Thyroid Body. (*Orig. in Centralb. f. d. Med. Wiss.*, Nos. 24, 25, 1890.)

606. **Harnack, Dr. E.**—On the Properties of Ash-tree Albumen, and How to Obtain It. (*Ber. d.d. chem.* ges. xxii. s. 3046.)

Art. 594. *Belakoff on the Influence of Digitalis and Nitrate of Potassium on the Metamorphosis of Chlorine, Phosphorus, and Sulphur.*—Dr. Ivan V. Bělakoff, of Professor V. A. Manassein's clinic, in St. Petersburg, publishes a monograph on the subject, based upon his experiments on four healthy medical men, aged from 30 to 34 (himself, and Drs. Atlasoff, Alexeevsky, and Serejnikoff). The observations were conducted exactly in the same manner as described in the note of Dr. Atlasoff's work (*vide supra*). The outcome of the research may be given thus:—(1) Under the influence of digitalis (administered daily in the shape of an infusion made of 0·5 gramme of the leaves to 90 of water), the metabolism of chlorides, phosphates, and sulphates invariably increases (the increase of chlorides averages 15·1 per cent.; of phosphates, 7·7; of sulphates, 9·0). (2) The effects are observed not only during the period of the administration, but also for some time after discontinuing the remedy. (3) Digitalis does not produce any appreciable impression on the assimilation (absorption) of either chlorides, or phosphates and sulphates. (4) Under the influence of nitrate of potassium (taken daily in the form of a solution made of 4 grammes of the salt to 90 of water), the metabolism of the salts proved to be augmented (the surplus of chlorides amounts, on an average, to 11·1 per cent.; of phosphates, 4·6; of sulphates, 9·4). (5) The effects, however, last only during the period of the administration. In the after-period, the metabolism markedly sinks (comparatively with the preceding period, the metamorphosis of chlorides falls, on an average, 17·1 per cent.; of phosphates, 13·4; of sulphates, 12·1). (6) The nitrate somewhat depresses the assimilation (absorption) of chlorides, as well as phosphates and sulphates (the absorption of chlorides lessens, on an average, 2 per cent.; of phosphates, 4·8; of sulphates, 2·6).

595. *Atlasoff on the Influence of Digitalis and Nitrate of Potassium on the Elimination, Assimilation, and Metabolism of Potassium, Sodium, Calcium, and Magnesium.*—In order to throw some light on the still obscure effects of diuretics in regard to the metamorphosis of the said mineral constituents of the animal body and food, Dr. Ivan I. Atlasoff, of St. Petersburg, has carried out (in Professor V. A. Manassein's clinic) a course of careful and elaborate experiments on four healthy medical men (including himself, the other three being Drs. Alexeevsky, who parallelly studied the action of the diuretic drugs on the metabolism of water [*vide* the *Medical Chronicle*, July, 1890,] Serejnikoff, who investigated the matter in regard to the nitrogenous metamorphosis [*vide* the *Provincial Medical Journal*, July, 1890], and Bělakoff, whose aim was to elucidate the action on the metabolism of chlorine, phosphorus, and sulphur), aged from 30 to 34. In two of the cases, the experiments, each of twenty days' duration, consisted of five equally long periods, during a second of which the patient was taking daily (in three doses) an infusion of digitalis made of 0·5 of the leaves to 90 grammes of water, and during a fourth a solution of 4 grammes of nitrate of potassium in 90 grammes of water. In the other two cases, the digitalis experiment (of twelve days' duration, divided into three equal periods, during a middle of which the drug was taken in the same doses daily) was separated from the nitrate one by an interval of twenty-four days. The doctors' dietary consisted of tea, with sugar, white bread, fatless beef-tea, lean roast beef, or roast veal. The results of Dr. Atlasoff's investigations may be condensed somewhat as follows:—(1) Both digitalis and nitrate of potassium markedly increase the elimination of soda through the kidneys, as well as its metabolism. The effects of the nitrate surpass those of digitalis. As to the absorption of soda, it is invariably diminished under the influence of digitalis, but only now and then under that of the nitrate. (2) Digitalis also augments the metabolism of potassa, and promotes its elimination with urine, the effects persisting after discontinuing the drug, but being less constant and by far less pronounced than in the case of soda. The remedy tends to depress the absorption of potassa. (3) Nitrate of potassium increases the proportion of potassa in the urine and fæces, the effect remaining still marked even after discontinuing the remedy. The potassic metamorphosis, however, mostly decreases during the period of the administration, but markedly rises in the after-period. The absorption of potassa improves, though but slightly. (4) Digitalis seems to depress the absorption of lime, but somewhat augments the metabolism of the latter, as well as its excretion through the kidney. The nitrate similarly diminishes the absorption, though less constantly, and inhibits the metamorphosis and elimination of calcaria with urine (5) Digitalis somewhat depresses the elimination of magnesia through the kidneys and its metabolism, but sometimes improves the assimilation. Nitrate of potassium inhibits the latter, but tends to promote the metamorphosis and excretion. Pointing to the fact that international literature is exceedingly scarce in regard to mineral metabolism, Dr. Atlasoff, in conclusion, lays down the proposition that "study of the systemic function presents an enormous importance, not only in physiological and pathological, but also in therapeutic regards, since our therapeutic agents, especially those of a mineral origin, must necessarily modify the metamorphosis in this or that direction."

596. *Draishpul on Invisible Perspiration and Arterial Tension in Children.*—Dr. Khaim I. Draishpul, of St. Petersburg, describes his observations on sixteen healthy girls, aged from 6 to 12, which he had made (under the guidance of Dr. Th. K. Arnheim, the Superintendent of the Elizavetinskaia Infirmary for Children), in order to study the course of an "invisible perspiration" in childhood, in connection with the child's age, height, and weight, the temperature, humidity and barometrical pressure of the atmosphere, the ingestion of water, the day and night time, and, more especially, baths. In each case the observation lasted five successive weeks, during a second of which the child

received a bath at 28° R. (95° F.), and during a fourth that at 30° R. (99·5° F.) every day, either at 7.30 p.m. or in the morning, half-an-hour after the breakfast. Cutaneous and pulmonary aqueous losses were determined, as usual, after Santorius's (or S. Santorio's) method (first described in his "Oratio in Archilyceo Patovino anno 1612 habita: De Medicina Statica Aphorisms," Venice, 1614; also London, 1676, 1700, 1712, 1720, 1823.—*Rep.*); the arterial tension by means of Basch's sphygsmomanmeter. The following are the principal results arrived at by Dr. Draishpul:—(1) In children, insensible perspiration proceeds more energetically than in adults, averaging daily from 25·3 to 35·2 grammes per 1 kilogramme of the child's weight, while in adults it oscillates between 15·8 and 23·4 grammes. (2) The losses decrease as the child grows older (in children of 6 they amount to 35·2 grammes per 1 kilogramme; in those of 7, to 30·5; in those of 9, to 25·3, etc.). (3) Given children of one age, but of different height and weight, in the smaller and lighter the perspiration proves to be more energetic than in the tall and heavy (*e.g.*, given children of from 6 to 9, the small-sized and light lose 29·4 or 30·6 grammes per 1 kilogramme a day, while the tall and heavy give off only 27·6). (4) The losses increase with rise of the temperature, and diminution of relative humidity, of the surrounding atmosphere. They decrease with lowering of the temperature and increase in the humidity. (5) The barometric pressure, as far as its ordinary oscillations are concerned, has no influence whatever on the course of invisible perspiration. (6) The day losses are considerably larger than the night ones, the latter amounting only to two-thirds of the former. (7) An increased ingestion of water tends to diminish cutaneous and pulmonary losses, but distinctly augments the daily quantity of urine, the surplus in the latter sometimes even surpassing that in water ingested. (8) Baths at 28° R., of from twenty-five to thirty minutes' duration, as a rule diminish cutaneous and pulmonary losses; but those at 30° R., of fifteen minutes' duration, invariably give rise to increase in the perspiration. (9) In children, the blood-pressure in the right temporal artery averages 89 millemètres; in the left, 94, an average for both of the vessels being 91·6. (10) Baths at 28° R. are followed in five minutes by a slight rise of the arterial tension, which mostly disappears within half-an-hour. Baths at 30° R. invariably cause some fall of the tension, which occurs in five minutes, to persist for over half-an-hour.

VALERIUS IDELSON, M.D.

597. *Heitzman on the Fine Structure of the Normal Skin.*—(1) The tissue of the cutis contains true cells, in the limited sense of the word, as little as any other variety of connective tissue. All the protoplasm lies between the connective tissue bundles, and is as continuous as omyxomatous tissue. (2) The protoplasm is not only continuous by means of large wing-like processes, but also by means of a slender network of living material, which permeates the ground substance of the connective tissue bundles. (3) Protoplasm and ground substance are of like structure, and may be transformed into one another at any time. The protoplasm may in process of physiological development change to ground substance, and the latter again in senile atrophy, and especially in pathological conditions to protoplasm. (4) There exist in the cutis not only the protoplasmic structures known as the "connective tissue cells," but also the ground substance of the connective tissue bundles.

598. *Smith on the Histology of the Skin of the Elephant.*—The chief points of interest observed in the skin of the elephant were:—(1) The long finger-like papillæ on the tip of the trunk, placed in connection with special nerve-endings, and no doubt conveying that exquisite sensibility which the animal is known to possess in this part. (2) The compound primary and secondary papillæ in the skin. (3) The absence of anything approaching glandular structure. (4) The canal system which exists in all bristles, and in a modified condition in most hairs. (5) The arrangement of the horny and sensitive laminæ at the corners of the nail, and the presence of a blood-vessel in true horny tissue.

599. *Strahl on the Growth of the Placenta of the Dog.*—The following are the results of the author's observations:—(1) The germinal vesicle is attached to some part of the uterus. There are present in the uterine wall two kinds of glands, long and short tubular, the crypts of Sharpey and Bischoff. (2) The crypts (probably all, but this is doubtful) close above towards the uterine surface, and change into irregular epithelial sacs. (3) The germinal vesicle unites in its anti-embryonal part with the surface of the uterus, only before the closure of the amnion, and then without the interposition of an ectodermal swelling The ectoblast of the serous membrane lies on the greatly thinned uterine epithelium, and bridges over the mouths of the glands which have remained open. (4). The amnion closes, and the serous membrane unites with the uterine wall in the region of a girdle-shaped zone. The formation of a syncytium with the ingrowing serous membrane begins, the crypts pass into the deeper parts, the long glands divide themselves into an upper, for the most part tolerably straight, a middle strongly widened, and a deep convoluted but again narrow portion. The middle *spongy* part is divided into an upper compact layer, and a deeper glandular part, the latter is not present in the region of the true placenta. (5) The ingrowing villi originally consist only of ectoblast and skin plate; afterwards the allantois on the inner surface of the serous membrane sends vessels into the villi. At the same time the crypts pass more and more deeply into the wall and become narrowed. (6) The cells of the uterine wall and the epithelium, as well as the connective tissue, show further peculiar alterations, which lead to the formation of a syncytium. (7) The crypts are obliterated, the villi pierce the whole compact sheet, arranged, of course, differently in the upper and lower layers. Their vessels anastomose with one another, and they reach with their points finally into the spongy space. (8) Formation of the complete placenta; a nearly equally arranged network of anastomosing vessels is formed in all parts of the compact sheet; in the septa between fœtal and maternal vessels, the differences between the two cell-forms lessen, the spongy spaces are filled with the expanded ends of the villi, and its epithelium shows the net-like arrangement of its protoplasm.

600. *Mollier on the Origination of the Pronephric System in Amphibians*—The first development of pronephros in Triton alp., is met with in an embryo of three somites. It appears here, as in Rana and Bufo, as a solid thickening of the parietal mesoblast, between the primitive vertebrae and the lateral plate. After this thickening (segmental tumour) has attained its full size, the first trace of a lumen begins to be visible in it, and it can then be perceived that it is formed of two or three segmental parts which appear as diverti-

cula of the somites in whose neighbourhood they lie. Each of these diverticula opens by a passage into the ventral segment of a primitive vertebral cavity, which itself passes into the unsegmented body cavity. The peripheral ends of the diverticula, which pass out of the somite in a convergent direction, unite into a common longitudinal tube, from which the two or three peritoneal communications pass out, and which connect themselves with the ventral part of the pronephros (Furbringer). In an embryo of Triton there were on both sides three pronephric tubes present; the ventral part originates from a small ventro-lateral segment cut off from the common pronephric mass, which only at its anterior extremity remains in communication with the before-mentioned horizontal canal of the dorsal part. This, originally straight canal, afterwards alters its shape to that of a curve, and finally to a S-shaped loop, which passes at its distal extremity into the pronephric duct. In the amphibians examined the ectoblast takes no part in the formation of the pronephros. An anterior segment of the pronephric duct, which developes in the neighbourhood of the two somites following upon the pronephros, originates from the parietal mesoblast. The author is unable to express any certain opinion as to the method of development of the distal part; whether the then existent distal end of the duct lies upon, or is bound up with the parietal mesoblast, *i.e.*, whether in this region it grows freely backwards, or proceeds *in loco* from the mesoblast, cannot with certainty be stated; the former appears the more probable.

601. *Seiler on the Development of the Conjunctival Sac.*—(1) The closure of the eyelids of the embryo of the mole does not lead to the formation of an epiblastic seam, but to that of an epiblastic plug, since the borders of the lids grow inwards towards a point in a radial manner. (2) The development of the eyelids is in the mole unsymmetrical, the upper lid is considerably longer than the other, and the place of closure is at the anterior upper border of the orbit. (3) The place of closure lies before the centre of the eyeball, which, during the closure, moves in a corresponding manner upwards. (4) The lens of the mole embryo at an early period passes through a condition in which lens, fibres, and nuclear zone are arranged in similar manner to that of other mammalian embryos. At a later period of development the peculiar structural relations of the full-grown lens appear when the nuclei of the nuclear zone extend into a great part of the lens. The changes in the form of the fibres appear in part to take place after birth. (5) The separation of the lids in the dog takes place by means of a process of cornification, which extends in a direction from without inwards, a few days after birth, and leads to the formation of a broad cell plate between the lids. (6) The closure of the conjunctival sac in the adder takes place in a similar manner to that of the mole, save that in the latter an epithelial plug remains, which is not the case in the former. The closure of the sac in the embryo of the adder takes place at a time when the corneal epithelium is still quite low; the permanent condition forthwith is reached, save for the subsequent thinning of the corneal and conjunctival epithelium.

602. *Kollmann on the Development of the Human Notochord.*—The development of the notochord from the entoderm outwards is the typical method of origin of this organ, and the human embryo forms no exception to the rule.

603. *Sabouraud on Complete Cleft Palate.*—The specimen was taken from a child which died at the age of 33 days. The cleft was on the left side, and engaged the lip also; the incisive bones were present, but carried very much forwards, and to the right. The left superior maxilla contained four dentary follicles normally developed, in which were to be seen, from before backwards, two molars, the canine and the precanine incisor. On the right were six follicles containing from behind forwards, two molars, the canine, the precanine incisor, and the two median incisors. From the point of view of dental evolution this case presents the typical form of Albrecht.

604. *Féré and Perruchet on the Thoracic Circumference and Vital Capacity of Epileptics.*—Certain anthropological measurements may vary under three influences which must not be confounded; those of race, physiological and morbid. Epileptics, like phthisical persons, are diseased individuals. M. Féré has measured the thoracic circumference, the stature, and the vital capacity (the latter by the spirometer, the quantity of expired air after a deep inspiration) of 137 epileptics, and compared the results with those of Houze, Snigerer and Hutchinson. He concludes (1) That the thoracic circumference in relation to the stature is not appreciably inferior to that observed in the normal condition. (2) That compared, on the contrary, with the vital capacity it is very inferior. It seems then the epileptics from the first point of view, which he calls anatomical, are less defective than from the second, which he calls physiological.

BERTRAM C. A. WINDLE, M.A., M.D.

605. *G. Pisenti and G. Viola on a Contribution to the Normal and Pathological Histology of the Hypophysis, especially as regards the connection between the Brain and the Thyroid Body.*—The authors (of the Peragia Pathological Institution) have made a careful study of the hypophysis, and find some peculiarities affecting (1) the normal histology; (2) the pathological histology; (3) the possible function of this organ. Leaving aside the form, size, and arrangement of the elements of the anterior lobes, it is an interesting fact that the colloid substance, long known to be formed within the follicles, is not confined to them, but passes thence into certain cavities in the surrounding connective tissue. This peculiarity is not visible throughout the hypophysis. The cavities form at certain points a connected system of expansions, varying in shape and size; in this system no endothelium can be made out. The substance contained therein is colloid substance, which is also found in the blood-vessels. As is well known, these are very numerous here, and their walls are so thin that they only show a simple and easily-seen endothelial layer. These vessels were usually full of blood, but in many the red corpuscles formed a column in the middle of the tube, the surrounding zone being occupied by a substance which stained like the colloid substance of the follicles and interfollicular spaces. Vessels cut lengthwise showed that the column of red corpuscles was here and there interrupted by this colloid. Sometimes a small vessel was seen emptying into a larger one, the smaller one entirely filled with colloid matter, with no trace of blood-discs, while the larger one held the usual central column. A connexion was found to exist between the follicles and the cavities around them, and it is probable that the colloid substance thus passes from the follicles into the circulation. The nature of these spaces cannot as yet be strictly defined; they shewed no distinctive marks of blood-

vessels, and they can hardly be called lymph-spaces or vessels, because the existence of these in the hypophysis has never been proved by histologists, though it has been implied by some; nevertheless, they are, probably, true lymph-spaces. One thing is certain, that although this gland has been called a ductless gland, its follicles do not form a closed system, and its secretory products pass into the blood. The author examined the body of a woman who died of uterine cancer, and had also thyroid enlargement, which was found to be a "fibrous struma." The hypophysis on examination confirmed all that has been above said; the colloid substance was more abundant than usual, the inter-follicular spaces being dilated. Considerable alterations were found also in the elements of the medullary layer. In Müller's fluid, the sections only showed, apparently, vacuolation, but the conjoint use of osmic acid gave intensively black drops, like veal-fatty globules (Rogowitsch did not use osmic acid); evidently fatty degeneration of the protoplasm of the colloid matter had accrued owing to its excessive formation. The small cavities having flat epithelium, noted by Peremeschko, between the two substances forming the anterior lobes, were enormously enlarged, and contained two substances staining differently, as shewn by double and treble stains. One small cyst of colloid matter was visible to the naked eye. The degeneration of the hypophysis was plainly due to the fusion of the spaces between the follicles, and the passage of colloid out of the latter. This agrees with the fact that not a trace of epithelium could be found in the walls of the small cysts. The ectodermic origin of the anterior lobe is granted, and also its structural similarity to the thyroid; embryology supports this, and histology comes with supplementary facts. Bioni and Langendorff have shown that the thyroid follicles are not closed spaces, but their secretion flows into the lymph-spaces, and thence into the veins, a fact already assumed by the old anatomists (Morgagni, Hente, Carpenter, &c.). Rogowitsch again observed that the blood-vessels of the hypophysis contain something besides blood, which he assumed to be colloid. The authors show that it is colloid matter. The homology of the thyroid body and the hypophysis is thus made quite certain, especially as both experiments and pathology show analogy of function. It has been recently shown in fact that extirpation of the thyroid body causes structural alteration of the hypophysis; again, pathological alteration of the latter has been found in cases of lesion of the thyroid. The function of one is increased when that of the other is lowered; they act vicariously within the limits of their size. It is more than probable that the condition after removal of the thyroid called cachexia strumipriva is owing to the fact that colloid substance is not prepared so richly as before, the hypophysis even by increased exertion being unable to make up the deficiency. Colloid matter is, therefore, necessary for the organism; it may, perhaps, have the property of neutralizing that hypothetical poison supposed to be formed in the absence of the thyroid. Experiments will be made to prove this by injecting colloid substance into animals that have lost their thyroid bodies.

606. *Harnack on the Properties of Ash-tree Albumen, and How to Obtain it.*—By repeated solution of copper-albuminate in weak soda-solution and precipitation by acetic acid, Harnack obtained a perfectly pure cupric albuminate. This was dissolved in copious soda-lye, and the dark-blue violet, almost gelatinous, solution was allowed to rest twenty-four hours. On neutralizing with Hcl, a colourless flacculent precipitate, no longer soluble in excess of acid, was obtained; this was washed in water, which dissolved some of it; the rest was dried on platinum at 100° C. and powdered. Its properties differ from those of ordinary albumen, thus:—(1) Pure albumen is not coagulable by a boiling heat, and, moreover, appears incapable of the so-called coagulated condition. (2) It is not precipitated by alcohol, ether, phenol, nor tannin. (3) Pure albumen forms with cold water a mixture, which gradually, especially if boiled, takes on the character of a solution. From the latter albumen is precipitated by neutral solutions (it is soluble on great dilution), and by acids (insoluble in excess), not by alkalies. If the property from neutral solutions is boiled together with the solution, it passes more and more into the insoluble modification of albumen. (4) If albumen solution be evaporated at 100° C. the dried albumen will have lost none of its properties; it will mix as before with water, dissolve by boiling, &c.

E. J. EDWARDES, M.D.

Surgery.

RECENT PAPERS.

607. BRONNER, DR.—On the Local Treatment of Tubercular Laryngitis. (*Provin. Med. Jour.*, June, 1890, p. 339.)

608. JAKSCH, R.—On the question of the Covering of the Bone Deficiency of the Cranium after Trepanning. (*Wiener Med. W.* No. 38, 1889.)

609. ALBU, A.—The History of Trepanning and its indication at the present time. (*Mang. Dissertation, Berlin*, 1889. *Deut. Med. Zeitung.* April 10 1890.)

610. MANLEY, DR. T. H.—On Hernia and its Radical Cure. (*Brooklyn Medical Journal*, June, 1890.)

611. PRICE, DR. JOSEPH.—A Retrospect of Abdominal Surgery. (*Philadelphia Medical News*, June 14th, 1890.)

612. WHITE, DR. J. W.—Treatment of Recent Anterior Urethritis. (*Philadelphia Medical News*, June 14th, 1890.)

613. PARKER, DR. J. R.—On the Re-construction of Deformed Noses by Grafting a portion of the Finger. (*Philadelphia Med. News*, June 7, 1890.)

614. DECKER, DR.—On a case of Strangulated Scrotal Hernia in a Hermaphrodite. (*St. Louis Med. and Surg. Jour.*, June, 1890.)

615. COX, DR. ROSS P.—On a case of Penetrating Wound of the Common Femoral Vein and Femoral Ring—Ligature of the Femoral and Internal Iliac Veins—Recovery. (*Med. Times and Reg.*, June 7 1890.)

ART. 607. *Bronner on the Local Treatment of Tubercular Laryngitis.*—Dr. Bronner divides cases of tubercular laryngitis into two classes:—(1st) Those cases which are prevalent in the early stages of pulmonary phthisis, where there is a peculiar anæmic condition of the whole mucous membrane of the larynx, a slight paresis of the laryngeal muscles, and a peculiar and persistent catarrh of the vocal cords; (2nd) those cases where there is infiltration, perichondritis, and ulceration. Where there is only an anæmic condition present, hot inhalations with oleum pini-sylvestris or eucalyptus can be used, together with general tonic treatment. In cases of paresis of the adductor muscles, the local application of a 5 to 10 per cent. solution of nitrate of silver often relieves the symptoms. In the treatment of catarrh, the local application of a 2 to 10 per cent. of nitrate of silver, or of 5 to 10 per cent. of chloride of zinc, seems to act very well. In severe cases of infiltration, the author considers that the only rational mode of treatment is to make free incisions into the affected parts with a knife or scissors, but this plan is not recommended by all laryngologists. Where there is ulceration, either of the vocal cords, the false vocal cords, or of the inter-arytenoid region or epiglottis, the most efficient and reliable treatment is the application ot lactic acid. One begins with a 20 per cent. solution, gradually increasing the strength to 80 or 90 per cent. It should be applied by means of cotton wool on a silver probe, and must be well rubbed into the affected parts. Cocaine should be applied before and after the application, in order to prevent any pain or subsequent swelling. Some observers prefer menthol to lactic acid, but the author does not think the former affects the ulceration so readily as lactic acid. After the application of the lactic acid, it is a good plan to use some iodoform, in the form of insufflation. In advanced cases, where local applications fail to cure the ulceration, it is usual to resort to surgical treatment. The only effectual way to treat these cases is to scrape thoroughly with a sharp curette. Since the introduction of cocaine, quite a revolution has been effected in the treatment of laryngeal disease; there is now no difficulty in applying local treatment to almost any part of the larynx without giving the patient pain. As a last resource, in cases of severe laryngeal ulceration, when local treatment fails, and the lungs are fairly healthy, the author strongly recommends early tracheotomy, though it is seldom that patients will consent to it.

RICHARD NEALE, M.D.

608. *Jaksch on the question of the Covering of the Bone Deficiency of the Cranium after Trepanning.*—Seydel's method (covering of the top of substance by lamellas of bone from the tibia) has the great disadvantage of necessitating a second wound in the individual. Jaksch has, therefore, employed for the covering of a deficiency of this kind lamellas of bone from the roof of the cranium of a young goose, transplanting them on to the granulating dura mater on the eighth day. The dressing was first changed after ten days, all eight of the lamellas were found to be of a rose colour and adhering firmly; after another week distinct spots of granulations showed themselves; the dividing lines had quite disappeared; on light pressure parchment crackling was felt. In another week the whole surface had granulated. After two months the wound was completely cicatrised and closed by bone.

609. *Albu on the History of Trepanning and its indications at the present time.*—Albu, in his prize thesis (Berlin, 1889), gives a full and interesting history of trepanning from the earliest period of its employment, and then the indication for the operation according to the ideas of to-day. Thus:—1. In subcutaneous injuries of the skull: (*a*) when after a fracture or simple contusion of the cranium undoubted symptoms of brain-pressure appear, which make probable a supra-dural hæmorrhage from the arteric meningea; (*b*) when after local injury disturbances of the brain function appear, which point to irritation of the cerebral cortex through contusion, by depression or splintering of the tabula interna, and which have not disappeared after eight or ten days. Depression of bone by itself never demands trepanning. 2. In complicated fractures of the cranium, especially comminuted fractures. In this trepanning is of prophylectic value, since it prevents, diffuse, suppurative meningitis and encephalitis. In extensive fracture trepanning is useless; the chief splinter is then to be removed, and infection guarded against by antiseptic dressing. 3. With foreign bodies trepanning is only to be performed when such body can be removed without exploring the brain. 4. In diseases of the cranial bones, tuberculosis, and syphilis, if the process is confined to a small part of the cranium. 5. In tumours of the cranial bones. 6. In collection of pus between the cranium and dura mater. 7. In traumatic meningitis, when the process is still limited to the primary suppurative focus. 8. In chronic deep abscess of the brain. 9. In limited tumours of the brain which are not too extended. 10. In reflex epileposis when remains of passed injury of the cranium are visible, and in Jacksonian epilepsy when the attacks are typical.

C. D'ARCY ADAMS, M.D.

610. *Manley on Hernia and its Radical Cure by Operation.*—The author is of opinion that the original and predisposing cause of hernia is almost invariably a congenital defect of development, more especially in the male sex. His experience is that a permanent, enduring cure by the aid of a truss is seldom if ever obtained. On the other hand, although its use may occasionally excite adhesive inflammation which will interfere with the bowels' descent, yet in the majority of cases, when strangulation follows after this delusive cure, the pathological condition present very much enhances the dangers, and it adds proportionately to the difficulty encountered in operation for a radical cure. No one particular operation for radical cure can be recommended for all cases. Each must be treated according to the conditions encountered. Dr. Manley says no surgeon should allow a recent hernia to remain down more than twelve hours if symptoms of strangulation are present, and he must carefully avoid severe or prolonged pressure in making taxis.

GEORGE BROWN.

611. *Price on Abdominal Surgery.*—The writer maintains that physicians in general practice have no longer the right to question the expediency and necessity of at once referring women afflicted with abdominal growths to the skilled surgeon. This course is a corollary to the now established proposition of abdominal surgery, that, in the large majority of cases, the earlier the operation the greater the chance of success. Looking back, nothing can be more striking than the change that has come over opinion as to what is and what is not a justifiable operation, a question which is of paramount importance in determining the choice of cases. Up to a recent period, it was the custom to bring so-called "pelvic" abscesses to the surface, stitch them there, and leave them to drain. Extra-uterine pregnancies were either left alone or were dealt with only in a tentative way that had nothing tangible in its results, except the death of the patient. There was preliminary puncture, with subsequent hæmorrhage or peritonitis, or there was

injection of morphine into the sac, or a trial of electricity. Practical surgery, like all other sciences, must leave pure theory behind. The theorist may be on the verge of an exact diagnosis, or at the point of urging radical surgical action, when the wraith of defunct pelvic cellulitis obscures his mental vision, and drives him back to opium, hot water, and poultices. Inflammatory tubal troubles are often dubbed "cellulitis." It should be strongly urged upon the general surgeon and general practitioner that operative gynæcologists do not find pelvic cellulitis. Electricians, experimentalists, and conservative procrastinators have a monopoly of that condition. They can easily establish and cure infinitesimal disease which has its chief exponent in pain. Pain, apart from lesion, should rarely in gynæcology be assumed as a proper cause for operation. Among careful surgeons, the reproach of indiscriminate operation as soon as a woman complains of pain is unmerited. As to electricity, if an ovarian abscess, or a pus collection in the pelvis, is curable by electricity, so is it in any other part of the body. If a fibroid can be dispersed by the same means, let it by all means be tried in bony tumours, or in necrosis of the jaw, or in osteo-myelitis. The mysterious force that can destroy one pathological product ought not to fail in another which is no worse. Electrical treatment is set down as fitted for certain cases only. Are the electricians, untrained in handling these tumours, to determine what are suitable cases, remembering that gynæcologists cannot be positive as to intra-abdominal growths? As to operation, it would be madness to operate on dying patients. There is no justification for the advice to wait in acute inflammatory troubles, septic or otherwise. When lung complications exist, operation is to be deferred until these are held in abeyance. While early operation is advocated in inflammatory conditions, and in evident pathological changes and in neoplasms, it is more to be urged in organic disease, where there is no chance of resolution. Waiting increases the size of the growth, and adhesions interfere with other organs. Complications, such as general adhesions, require a practical acquaintance of normal and of pathological relations. A knowledge of how to deal with adhesions quickly and safely requires special abdominal training. Of late, there has been much discussion as to the sequelæ of these operations. A drainage-tube, carefully introduced, carefully kept clean, and early removed, has no more reason to cause a fistula than has the suture in the uterus after Cæsarean section. In the writer's hands silk has not caused fistula. The great points are, to have as fine a ligature as is consistent with safe tying, to tie in sound tissue, and to cut the ligature close. Cat-gut he regards as unsafe. Finally, results depend largely on the experience and training of the operator. Many cases do not necessarily make a skilful operator. Many men of large experience, so far as the number of operations is concerned, do not obtain results such as we should expect. Other men, with a comparatively few cases, have results that stamp their work as careful and conscientious. To fail in these latter days of the art, because we do not know how to tie a ligature, or to clean a drainage-tube, or to stitch and re-sect an intestine, is unjustifiable homicide.

612. *White on the Treatment of Recent Anterior Urethritis.*—The author was led to experiment from reading an article by Dreyfous, on "Antisepsis of the Urinary Organs by the Internal Administration of Drugs." That paper reports seven cases of gonorrhœa treated by salol. Sahiti has shown that salol is decomposed in the body into salicin and carbolic acid, the latter being excreted by the kidneys. Urine of patients taking salol did not decompose, although exposed to the air for several weeks. Dr. White made careful experiments in fifty-three cases of recent urethritis. In thirty-five, the discharge almost or entirely disappeared during the first week. The writer gave 20 to 25 grains daily, but since then has seen an article by Dr. Ernest Lane, in the *Lancet*, advocating thrice that amount. In no case did gonorrhœal rheumatism (urethral synovitis) develope. The author arrives at the following conclusions:—(1) The microscopical and experimental evidence in favour of the bacterial origin of gonorrhœa is confirmed by clinical and therapeutical experience. (2) The results of antiseptic treatment have not been so uniformly successful as would be expected, on account of (*a*) the anatomical and physiological peculiarities of the male urethra; (*b*) the difficulty of applying sufficiently energetic local antisepsis; (*c*) the necessarily intermittent character of such applications; and (*d*) the failure to combine with the topical treatment appropriate internal medication. (3) No one antiseptic agent can be depended upon, in the strength at which it can be borne by the inflamed mucous membrane, completely to sterilize the discharges and the suppurating surfaces. A judicious combination of several antiseptics, if not essential to success, is at least of considerable value. (4) The internal administration of salol, in conjunction with copaiba and cubebs, renders the urine aseptic, and probably antiseptic, so that it acts as an exceptionally thorough and efficicent antiseptic injection, shortening the duration of the disease and diminishing the frequency and severity of the complications. (5) The production of urinary asepsis by internal medication is of considerable value, not only in the inflammatory affections of the genito-urinary tract, but in the preparation of the patient for operation upon those organs, and in the after-treatment.

613. *Parker on the Re-construction of Deformed Noses by Grafting a portion of the Finger.*—Plastic surgery dates from Tagliacozzi's experiments of grafting the cock's spur into the comb, and the end of the rat's tail into its back. During the last decade great advances have been made in the relief of deformity by operation. The writer has not found any mention of his particular method in current medical literature. The condition he proposes to treat is the great detormity, resulting from destruction of the nasal bones and the bony septum by ulceration and necroses, which causes a sinking in of the entire upper portion of the nose. The great rhino-plastic difficulty is to preserve the prominence and symmetry of the nasal bridge, a thing almost impossible to do with muscular or cutaneous tissue alone. If cartilage or nasal bones be entirely absent, they must be replaced by analogous tissues from the lower animals or from the patient. It occured to the author that he might be able to get a ridge-pole, as it were, from the phalanges of the little finger of the patient's hand. To determine the best method of making the attachment of the finger, requires much care and thoughtful consideration in each case. The operator must be governed by the extent of the deformity, size, and length of nose and finger, and the position in which the hand can best be confined. Illustrative case as follows:—J. G., aet. 35, cattle dealer, complained of dacryocystitis and severe conjunctivitis (by extension). The nasal bones and bony septum had been destroyed,

leaving a deeply sunken bridge. Patient had suffered from syphilis. He consented to operation with the double object of relieving deformity, and of preserving the patency of the tear-ducts. Both deformity and eye-trouble were very annoying. Under ether the nasal passages were cleansed with alkaline and antiseptic lotions, and the posterior nares plugged. A median incision was made down nose from root to tip, and the tissues forcibly separated and elevated. The nail and matrix were then dissected from the little finger of the left hand, and the finger shaped to fit the wound. Hæmorrhage having been controlled, the finger was placed in the wound with the tip of the first phalanx resting upon the bone at the root of the nose, the outer side of the finger being placed anteriorly to give the organ as natural a contour as possible. Thumb rested on chin and remaining fingers on left cheek. Finger-graft secured by silver sutures, skin edges by silk ditto. Lower canaliculi were slit open and styles inserted. An india-rubber condom was pushed well back into the posterior nares on each side, and inflated with warm water. These bags acted as splint and water bed. Outer wound dressed with corrosive sublimate gauze. Cheek padded under fingers with absorbent wool. Hand and arm secured in position with a rubber bandage. Temperature 101° on following day, but never higher. The rubber bags were renewed and nostrils syringed for five days. The finger was then amputated at the second joint, and the edges of the skin of the new nose brought together with silk sutures and dressed with flexible collodion. On removing this six days later, wound was found to have united by first intention. The septum and phalanx had formed a rigid bony union, and the skin of the finger that was placed in the nostrils became normal mucous membrane. Apart from general considerations, Dr. Parker calls special attention of ophthalmic surgeons to the importance of relieving this deformity.

David Walsh.

614. *Decker on a case of Strangulated Hernia in a Hermaphrodite.*—The following case is of some rarity, and is worthy of the attention of surgeons interested in the subject. A patient, aged 12, was found to be suffering from a scrotal strangulated hernia, about the size of an ordinary fist. She was suffering intense pain, and all the symptoms were present of strangulated hernia. Upon examination the patient was found to be a hermaphrodite. There was a well-formed penis and scrotum, about the size of a boy of her age, but the penis was devoid of a meatus urinarius, the testicles were very small and irregular in outline, the scrotum overhanging what appeared to be the upper cleft of the vagina. Just below the scrotum, and in the upper cleft of the vaginal chink, was the urethra, which was not more than three-fourths of an inch in length. She had well-formed labia majora, but no labia minora, and the sulcus between the labia was covered with mucous membrane; there was, however, no vagina, and no evidence of a uterus was discoverable.

615. *Ross P. Cox on a Case of Penetrating Wound of the Common Femoral Vein and Femoral Ring, Ligature of the Femoral and Internal Iliac Veins —Recovery.* — The following are the notes of this interesting case:—The patient, a man aged 22, half-an-hour before admission into the hospital, while pushing a piece of hard wood through a moulding machine, by the aid of a stick, three-quarters of an inch broad and half an inch thick, resting against his right groin, the blade struck a knot and forced the bits of wood backward with such energy as "to double him up." Almost immediately a swelling appeared at the right groin, and on examination a tumour was found about as large as a hen's egg at the centre of Poupart's ligament, and extending somewhat above it. Near the centre of this enlargement there was a slit, extending transversely about half-an-inch. Less than an ounce of blood had been lost, and all bleeding had ceased. Under ether, Dr. Keen enlarged the wound and explored its nature. An incision was made at the seat of injury and the tissues divided until the finger could be carried deeply into the wound. At a depth of two inches the tip of the probing finger entered a perforation in what felt like a thin membrane, just internal to the femoral artery. The bleeding had now become free, and the withdrawal of the finger was followed by a copious gush that left no doubt that its source was the femoral vein. The wound was further enlarged, and Poupart's ligament, the injured vein, and its artery were exposed to view. No injury to the latter was to be made out. Further observation showed that the vein had been pierced through both its anterior and posterior walls, and that the abdominal cavity had been entered through the femoral ring; the finger could be carried through the ring into the abdominal cavity for about an inch, but there was apparently no rent in the peritoneum. The vein was secured both below and above the lesion, by means of two bulldog forceps, and divided between the instruments. A medium sized aseptic silk ligature was applied to the distal end of the vessel. Much difficulty was experienced in tying the proximal end. Considerable traction to draw the vein down, and still more to lift Poupart's ligament up with a retractor, had to be used before it was accessible. The wound was irrigated with weak bichloride solution, the ligatures were cut off close to the knots, and thorough drainage secured. The skin incision was about four inches long; the edges were brought together with silk sutures. Dry dressing was applied, the limb was elevated to an angle of 33° from the horizontal. Six hours after the operation the dressings were found to be saturated with blood, about one pint of which had been lost. The wound was examined, but all bleeding had ceased, the hæmorrhage was probably from a small branch that opened into the vein at some point between the ligatures. Fresh dressing was applied with pressure. Considerable œdema of the limb was noted, and the leg was also blue. Fifteen hours after the operation the temperature of each thigh was 94°F. The cyanosis has gradually diminished. Perfect recovery subsequently ensued, without noticeable incident, and the patient returned to his work that required constant standing. After four months of this work, no other discomfort than slight œdema and stiffness was complained of in the affected limb, and even this disappeared in the course of a few months. The author adds a summary of the recorded cases in which wounds of the common femoral vein have been treated. These cases have been carefully selected from all sources. (*a*) Wounds of common femoral vein, not done in tumour operations, treated by immediate ligation of vein; three cases, including the one above reported, two deaths from gangrene, and one recovery (the present one). (*b*) Ligation of common femoral vein for wounds, not made in tumour operations, after trying and failing with compression: two cases, one death from septicæmia, and one recovery. (*c*) Twenty-six cases of ligation of common femoral vein, wounded

in extirpation of tumour; sixteen recovered and ten died—of the ten deaths, three were from hæmorrhage, two from recurrence of malignant growth, two from pulmonary œdema, one from pyæmia, one from exhaustion, and one from limited gangrene and exhaustion, and a man, forty-nine years old, infected generally by sarcoma. (*d*) Twenty-seven cases of ligation of the common femoral artery or external iliac artery, and the homolagous vein, for wounds made in tumour operations, give six recoveries and twenty-one deaths. Of the twenty-one deaths, twelve were from gangrene, four from septicæmia, and one each from hæmorrhage, recurrance of growth, pyæmia, and pneumonia. The cause of death of one case was not given. (*e*) Wounds of the common femoral vein, not made in tumour operations, treated by ligation of the homolagous artery only; five cases, five deaths; one each from septicæmia, gangrene, shock and exhaustion, and in one instance no cause was given. (*f*) Wounds of the common femoral vein, not made in tumour operations, treated by ligation of both artery and vein; seventeen cases, giving six recoveries, and eleven deaths. Of the eleven deaths, five were from gangrene, four had no cause assigned, and two were from hæmorrhage. (*g*) Wounds of common femoral vein treated by lateral ligation; three cases, with one death from hæmorrhage, and two recoveries. (*h*) Wounds of common femoral vein, not treated by ligation of either vein or artery; eleven cases, eleven deaths; four from causes not given, three from hæmorrhage, and two each from pyæmia and gangrene.

H. PERCY DUNN.

Medicine.

RECENT PAPERS.

616. M. A., DR.—On Hypertrophy of the Heart in growing individuals. (*Revue de Thérapeutique*, June 15, 1890.)

617. SHAKESPEARE, DR. EDWARD O. — On the Prevalence of Tuberculosis. (*Boston Med. and Surg. Journ.*, vol. cxxii., No. 23, p. 552.)

618. CHARCOT, PROF.—On a Case of Diabetic Paraplegia.

ART. 616.—*On Hypertrophy of the Heart in Growing Individuals.* — In an article under the above signature, on "La Mégalocardie de Croissance," the writer points out that not unfrequently children and young adolescents complain of palpitation, or of persistent headaches, or of breathlessness on even slight exertion. In these patients one seeks in vain for the anæmia or chlorosis so frequent in young girls, or for valvular lesions, and one fails to obtain a history of antecedent rheumatism or chorea, but physical examination reveals the presence of hypertrophy of the heart, and of a systolic murmur at the apex. Percussion shows an increase of dulness in a vertical direction, the tranverse diameter remaining normal, and the apex beat being in the sixth, seventh, or even eighth interspace, in the nipple line. Auxcultation occasionally gives negative results, but more frequently there is a somewhat rough dystolic murmur audible at the apex and diminishing in intensity as one approaches the base. It is easily distinguished from the murmurs of anæmia by the fact that it is not propagated along the vessels. This hypertrophy of the heart is not accompanied by any lesion capable of causing a mechanical obstacle to the circulation. There are no valvular lesions, and in consequence no compensatory hypertrophy; no arterio-sclerosis, nor Bright's disease, nor any pulmonary affection. It is an hypertrophy of the left side of the heart only, purely functional, and due to a want of paralelism between the development of the heart and that of the other organs. According to Beneke the heart doubles its volume between the time of birth and the second year, and doubles it again between the second and seventh years. At the seventh year it ceases to develope and remains almost stationary until the age of fifteen. Between fifteen and twenty it augments its volume by a third, and at the latter age ceases to grow. From the seventh to the fifteenth year the heart normally remains stationary, but if the child undergoes manual work or physical exercise out of proportion to his strength, or if he grows at an abnormal rate, the heart, obliged to perform an improper amount of work, becomes augmented in volume. At twenty years the heart has reached its full development, while the body continues to increase up to the age of twenty-five. There is, therefore, at the former age a normal hypertrophy of the heart, since from this period onwards it is capable of fulfilling the requirements of the growing individual, who increases until at the latter age he has reached his full development. In certain cases the harmony which ought to reign between the development of the various organs is disturbed; if the want of paralelism be slight it gives rise to no functional troubles; if on the other hand it be strongly marked, we have the various symptoms and physical signs already alluded to. Sée describes three forms of "megalocardie de croissance." In the first or tachycardiac form the only symptom complained of is palpitation, and a differential diagnosis has to be made with palpitation of a neurasthenic nature, and with that of Grave's disease. In these two cases there is frequently no hypertrophy. The second form is the dyspnœic; the patients complain of breathlessness, especially on exertion, and there is neither palpitation nor headache. The third is the form céphalalgique; the headache is frontal, is increased by intellectual effort, diminished by fresh air, and lasts for months at a time. It is neither unilateral nor accompanied by nausea and vomiting as in migraine, and is never localised at the points of emergence of the cranial nerves as occurs in neuralgia. The hygienic treatment advocated by the writer varies according as one has to deal with the cardiac hypertrophy of childhood or adolescence. In the former case one should recommend a diminution of physical and intellectual work, and order a nitrogenous diet. In the latter case the origin of the hypertrophy being, not the compensation of any physical obstacle, but simply physiological and somewhat excessive; one can without fear recommend exercise and intellectual labour. A combination of digitalis with iodide of potassium is also very strongly recommended.

WM. A. FITZGERALD, M.D.

617. *Shakespeare on the Prevalence of Tuberculosis* —An interesting discussion on the most important subject of the prevention of tuberculosis took place at a meeting of the Association of American Physicians, on May 14. It was introduced by a paper on "What Can and Should be Done to Limit the Prevalence of Tuberculosis in Man?" by Dr. Shakespeare. He said:—"As it is now generally admitted that tuberculosis is an acute infectious disease due to the bacillus tuber-

culosis of Koch. In view of the admitted inefficiency of all present modes of treatment of and the many actual cases of tuberculosis, effective prophylactic measures are infinitely more important to the general public, and should also be to the physician, than the most skilful therapeutic measures. Since analysis of the fullest records bearing upon the relation of family history to the causation of tuberculosis could possibly account, through hereditary predisposition, for little more than one-fourth of the cases, the most perfect measures conceivable for the lessening of that influence cannot be rationally compared in importance to those which are essentially based upon the destruction of an infective poison which is virulent enough to produce the disease, not alone in the comparative few who may be born with hereditary predisposition, but also to cause tuberculosis in the majority who succumb, notwithstanding the absence of a hereditary weakness. While the discovery of this bacillus has yet little advanced the treatment and cure of tuberculosis, it has revealed most important principles upon which to base efficient means of preventing the spread of the disease. In the prevention of tuberculosis the following principles formed the basis of an efficient system: (1) With regard to those already diseased, effective preventive measures should look to the rapid destruction of the tubercle bacilli in the excretions and secretions of the affected, and by little as possible prolonged close association of the well with the sick. (2) With regard to those liable to become infected, nothing which may contain the living tubercle bacillus should be permitted to enter the digestive apparatus. Rigid inspection of meat and milk a necessity. (3) Tuberculous subjects should not be admitted to hospital wards in which those with other diseases, especially of the lungs, are confined. In general hospitals, consumptives should be assigned to special consumptive wards. (4) Special hospitals for the treatment of consumption should be established." Dr. Trudeau, Saranac Lake, spoke of the decrease of the number of cases in England resulting from *proper separation of consumptive patients and the care of the sputum.* The paper and the discussion which followed it, show that in America the subject of the prevention of tuberculosis is receiving a good deal of the attention, which it merits, at the hands of our American *confrères.*

VINCENT D. HARRIS, M.D.

618. *Charcot on a Case of Diabetic Paraplegia.* – In the year 1864 Marchal de Calvi, in his work entitled "Recherches sur les Accidents Diabetiques," protested strongly against the growing tendency to apply to clinical medicine without hesitation the results of the laboratory. For after C. Bernard's experiments there was an inclination amongst physicians to regard diabetes as due to disease of the central nervous system, especially of the fourth ventricle. Any lesions found *post mortem* were regarded as primary; it was never asked whether the diabetes might have caused them . . . "car il est bien évident que les lesions spinales *productrices* ont empêché les médicins de reconnaître les lesions cérébro—spinales *prodruites.*" The monoplegia, sometimes observed, which appear to be due to multiple foci of cerebral softening, such as those described by Dr. Dickenson, are caused by vascular alterations-consecutives on diabetes. In the present lecture an organic or dynamic affection of the lower limbs will be discussed, which may for the present be called diabetic paraplegia, analogous to alcoholic paraplegia. In 1880 Jules Worms wrote of symmetrical neuralgias in diabetes (*cf.* Buzzard, Drasche, Ziemssen). The neuralgias were not always "bilateral," and were occasionally fulgurating (Bernard et Féré). Sometimes there were formications, hyperæsthesiæ and dysæsthesiæ, as in ataxia, and even absence of knee-jerks (Bouchard, 1881, Lectures, and in 1884. Congrés de l'Association Française pour l'avancement des Sciences). The dates are given because they are ignored in Leyden's recent work, which cites Veil for the neuralgias, instead of Worms, and Althaus for the sensory troubles resembling tabetic symptoms, instead of Raymond and Oulmont, 1881. Féré and Bernard wrote on the subject generally in the "Archives de Neurologie," 1882. For the loss of the knee-jerk Raven (1887) is cited, instead of Bouchard (1884). Absence of knee-jerks in grave cases of diabetes, not necessarily grave because a large amount of sugar is excreted, is evidently due to peripheral neuritis, the spinal cord being found intact . . . In some cases Leval-Piquechef ("Des pseudo-tabes," Paris, 1885) found locomotor ataxia closely simulated by this absence, the lightning-pains and other sensory troubles, and the ataxic gait. Alcoholic paraplegia shows the same symptoms. But in both the diabetic and alcoholic kind of ataxia the gait is not really that of tabes—it is the "démarche de stepper," the muscular paralysis predominating in the extensors of the foot. In fact, in all the pseudo-tabes alcoholic, diabetic, saturnine, beri-beri, and arsenical, we see the "steppage," not the true ataxic walk. The front part of the foot falls, and the patient is obliged to step higher than usual to prevent the toes from catching the ground. The paralysed muscles show the electrical reaction of degeneration. Meanwhile, in all the above, the spinal cord shows no coarse alterations; the posterior columns in particular are quite free. Diabetic paraplegia is probably due to an auto-intoxication. There is not the painfulness or pressure of the limb found in the alcoholic variety; but the feet fall even when the patient is seated. On the whole the case exhibited bore the closest similarity to alcoholic paraplegia, while there was no alcoholism about it. Of course a true tabes may co-exist with diabetic paraplegia; the symptoms would then differ. The diabetes might appear late (Oppenheim), and would then be due to extension of the tabetic lesion to the fourth ventricle; these cases are rare. Or true diabetes may occur during tabes or precede it, independently, as a coincidence. But not a fortuitous coincidence, for the arthritic and neuropathic families (of diseases) are closely related.

E. J. EDWARDES, M.D.

Pharmacology and Therapeutics.

RECENT PAPERS.

619. KLEEBLATT, DR.—On the Curative Influence of Erysipelas in Malignant Tumours. (*Münch. Med. Wochenschr.* July, 1890.)

620. RICHARDSON, DR.—On Blood-letting for the Reduction of Fever Heat. (*Asclepiad*, May, 1890.)

621. JAMIESON, DR., AND DOTT, MR.—On Super-fatted Soap. (*Brit. Jour. of Dermatology.*)

622. WELCH, DR. GEORGE T.—On the Treatment of Alcoholic Delirium in Pneumonia. (*New York Medical Record*, June 21, 1890.)

623. Rothziegel, Dr.—On Strophanthin. (*Dent. Med. Zeitun.* May 1, 1890.)

624. Detwiller, Dr. B. H.—Campho-Phenique. (*New York Times and Register*, May 31, 1890.)

625. Schneck, Dr. J.—On Catalpa Speciosa (Warder). (*Philadelphia Med. News*, June 7, 1890.)

626. Kumps, Dr.—On Hypodermic Injections of Ether in Neuralgia. (*Revue de Thérapeutique*, 15 June, 1890.)

627. Chapin, Dr. H. Dwight.—On the Treatment of Diarrhœa in Early Life. (*New York Medical Record*, June 21st, 1890.)

628. Gluck, Dr. Isidor.—On the Prevention of the Toxic Effect of Cocaine. (*New York Med. Record*, June 21, 1890.)

629. Fackler, Dr. G.—On Calomel as a Diuretic. (*New York Medical Record*, May 31st, 1890.)

630. Mairet, Professor.—On the Physiological Action of Chloralamide. (*Bulletin Med.*, June 11th, 1890.)

631. Gley, Dr.—On the Poisonous Properties of Chloral-antipyrine. (*Bulletin Med.* June 25th, 1890.)

632. Zongolowicz, Dr. Danil L.—On the Treatment of Gastro-Intestinal Affections. (*St. Petersburg Inaugural Dissertation*, No. 48, p. 49.)

633. Geissler, Dr. Theodor K.—On the Influence of Hot Enemata on the Bodily Temperature, Pulse, Arterial Tension, Respiration, and Cutaneous and Pulmonary Losses in Typhoid Patients. (*Vratch*, No. 22, 1890, p. 493, with 14 diagrams.)

Art 619. *Kleeblatt on the Curative Influence of Erysipelas in Malignant Tumours.*—The well-known fact that new formations, malignant tumours, and infection tumours (syphilis) diminish or even permanently disappear under the influence of intercurrent erysipelas, must always raise the question whether, now that one can obtain and cultivate the coccus of erysipelas, it is not justifiable to attempt the cure of such tumours, especially when surgical interference is impossible, by the inoculation of erysipelas. To the elucidation of this question Kleeblatt gives three cases which came under his personal observation, two of which were cured, and one greatly improved. (1) A strongly-built and healthy-looking man of 54. On the left tonsil was a hard moveable tumour, the size of a hen's egg, and at the angle of the jaw several enlarged lymphatic glands. Diagnosis: lympho-sarcoma. On May 12 the tumour and glands were removed by Czerny, and the diagnosis confirmed by microscopical examination. On June 5 the patient was discharged cured. On the 5th of August swollen neck and carotid glands were noticed, and on October 26 the tumour had increased. After 45 injections of Fowler's solution a series of abscesses appeared; these were opened, and the swelling locally diminished, while in other places fresh swellings arose, on the mastoid process one the size of a hen's egg, and in the suprascapular fossa one the size of a child's head. On the 7th of March, 1888, a spontaneous attack of erysipelas occurred, involving the breast, neck, face, and back. The suppuration from the abscess greatly increased. On March 18th erysipelas still present; temp. 38·5. Tumours reduced to a quarter of their former size, that in the suprascapular fossa being only the size of a pigeon's egg. On April 4th, patient went out. In May the earliest tumour had increased again. On June 2nd, erysipelas was inoculated (cocci provided by Fehleisen); on 3rd, rigor; on 4th, attack of erysipelas. Great suppuration from old abscess-openings. Softening of tumours, which by June 22nd had completely disappeared. July 2nd, increase of tumours; inoculation without effect; tumour increasing rapidly. Patient went out and died on 18th November, from hæmorrhage from vessel in the neck. (2) Strong man, 52, with hard tumour of mastoid process to angle of the jaw; left nostril stopped up; nothing to be seen by the laryngoscope. Diagnosis: lymphosarcoma, proved microscopically. Treatment: injections of liq. Fowleri (without effect, though abscess produced). July 22nd, inoculation with erysipelas (material from Koch); 23rd, rigor; 24th, erysipelas of breast and back; 29th, softening of tumour; free suppuration from the abscess. August 4th, tumour totally disappears; nostril free, no return. (3) Dressmaker, 21. Hard swelling—size of pigeon's egg—on the under eyelid. Diagnosis: lymphadenoma; inunction of an ointment of pot. iodid and ung. ciner. Some days after the inunction an excoriation formed, and then spontaneous erysipelas of the face. Considerable suppuration in the tumour. After six days the swelling had completely disappeared. No return of the disease. On the question, how the tumour diminishes and disappears under the influence of erysipelas, two views are to be noted; according to one, while blood-corpuscles migrate in great quantities, fatty degeneration of them takes place, the cells of the new formation being involved in the same process. Since the discovery of the coccus of erysipelas, it is accepted that the coccus has a direct influence on the cells of the tumour and destroys them; perhaps, also, in conflict with the supposed cocci of the tumour, it proves itself stronger and remains the victor. At all events, these cases invite more extended observations to settle the question as to the advisability of attempting the cure of malignant tumours when operation is not possible, by the inoculation of the erysipelas coccus. C. D'Arcy Adams, MD.

620. *Richardson on Blood-letting for the Reduction of Fever Heat.*—Dr. Richardson records a case of peritonitis in which the temperature reached 109° F. The patient was a lady, and when the author was called to see her he found that, in spite of antipyretic remedies, she was in a state of great danger, with a temperature of 109° F. In the emergency, the author decided to try the effect of blood-letting, and at once opened a vein in the arm. The blood was received in a vessel in which a clinical thermometer was placed, and when the bulb of this came in contact with the blood it registered 108° F. Blood was allowed to flow until signs of exhaustion were first felt, and nearly twenty-two ounces were removed. For some time the urgent symptoms were greatly relieved, and the temperature went down to 101° F. The improvement lasted about four hours, when, notwithstanding the administration of ice-water freely, and quinine in large doses, the elevation of temperature recommenced, and continued until it again reached 109° F., shortly after which death took place. The author adds that the clinical lesson to be learnt from this case is, that while removal of blood has the effect of reducing the febrile heat, it does not control the process of zymosis, on which the febrile condition itself depends. As a practice, it does not stand favourably above such measures as the continuous application of cold to the abdomen, over the region of the heart.

621. *Jamieson and Dott on Superfatted Soap.*—In the *Brit. Jour. of Dermatology*, Dr. Jamieson and Mr.

Dott contribute an article on the value of the superfatted basic soap made by Douglas, of Emisbüttel. One great value of this soap is that in winter-time it prevents the hands from becoming chapped, and if employed even for young babies the skin remains smooth and fine; when used if the skin has become red and rough, in consequence of the previous use of an alkaline soap, the tenderness passes away, and often a threatened attack of eczema is checked. This toilet soap is a bibasic one, containing soda and potash, and the excess of fat is said to be olive oil. Too great a superabundance of fat is to be avoided in a soap, and that made by Douglas varies between 5 and 10 per cent. as a limit of excess.

RICHARD NEALE, M.D.

622. *Welch on the Treatment of Alcoholic Delirium in Pneumonia.*—The onset of pneumonia in inebriates is quickly followed by delirium, which assumes a violent and alarming character unless prompt and vigorous measures are taken to quiet the patient. For this purpose, says Dr. Welch, opium and its derivatives, as also a long list of other narcotics and anodynes are useless, but chloral and digitalis combined, if used heroically, are irresistible. He gives fifteen grains of chloral and half an ounce of infusion of digitalis every hour until the patient is quieted or sleep produced. As Stillé observes, there would appear to be something in delirium tremens which ensures a singular toleration of digitalis. In small doses it is a spur to the feeble heart, but it is not until comparatively large doses are given that we get the cardiac tonic properties promised by therapeutists. In the use of a remedy capable of great results, we must be both bold and wary. To be only the latter is to become subject to the echoes of disaster which every physician has heard and few have witnessed. Chloral alone has answered the indications in alcoholic delirium, but in small doses it seems to have little effect unless very frequently repeated, and in large doses there is danger of heart-paralysis, but combined with digitalis each may be given in moderate doses, and yet a speedy effect be evinced. A case of pure delirium tremens might yield in time to other and simpler measures; the probabilities are that it would; but associated with pneumonia the condition is hourly increasing in gravity, and only a short time is offered in which to do our utmost to rescue the patient from impending death. Brought face to face with this situation, Dr. Welch has thrown aside all other means, and has scored success with the combination he so confidently recommends.

GEORGE BROWN.

623. *Rothziegel on Strophanthin.*—Merck's Strophanthin was used, in doses of from 2 to 3 dms. or from 1½ to 3 and 5 mgs daily. It was administered in drops according to this formula: ℞ strophantini grm. 0·003—0·005; aquæ distill. or aquæ laurocerasi 10·04; Sig. 10 to 20 drops every two hours, or in capsules each of which contained 0·003 grm. strophanthin. It was also given in hypodermic. injection of 5 decigrms. The results were: (1) the circulatory system was evidently favourably influenced. After small doses (0·0002—0·0003) the pulse became stronger and more regular, in most cases within five or ten minutes. Later followed the influence on the pulse; arhythmia, generally on the second or third day of giving the remedy. It appeared generally later than with digitalis, but lasted longer, and still continned for sometime after its suspension. (2) The dyspnœa and palpitation occurring with various organic diseases of the heart paraplegia, &c. were favourably influenced by strophanthin. As a rule the dyspnœa disappeared before the palpitation. In so called nervous palpitation a lasting effect could not be affirmed with certainty. (3) The secretion of urine was increased, but often only after the remedy had been given for some time, and, as a rule, the quantity was never so great as after digitalis or tincture strophanthi. The increase of the diuresis remains for some days after the discontinuance of the strophanthin. It is due to increased blood-pressure only, and not to any direct influence on the kidneys. Symptoms of irritation of the kidneys were never observed. (4) Gastric disturbances after the long continuance of the remedy were very seldom seen, and even then strophanthin in capsules was well borne. On the contrary, increase of appetite was often noticed. The secretion of sweat was not increased. (5) The nervous system was only affected indirectly through the regulation and invigoration of the power of the heart. (6) No cumulative effect was observed. The remedy can be given without harm for three weeks. (7) Subcutaneous injections of an aqueous solution in the dose of 0·005, in cases of heart-weakness, have a prompt and lasting effect in increasing the strength of the pulse, and, with proper antiseptic precautions, are followed by local or general symptoms of irritation. (8) In comparison with tincture of strophanthus, strophanthin must take the second place. The tincture is safer, quicker, and more energetic; it also has greater influence on the diuresis. These are, however, cases in which neither tincture strophanthi nor digitalis, nor the other heart remedies, can be borne, while strophanthin is, and with good results. It must be, therefore, looked upon as a good substitute for tincture of strophanthus. (9) The indication for the employment of strophanthin in valvalar affections with and without affection of the myocardium as well as in organic affections of the heart muscle alone, is given by insufficiency of heart-power and the resulting symptoms. In acute and chronic morbus Brightii and pleuritis, strophanthin only increases the diuresis, when this is lessened as a consequence of insufficient heart-work. In tubercular pleuritis it is without effect.

G. D'ARCY ADAMS, M.D.

624. *Detwiller on Campho Phenique.*—Among recent antiseptics offered to the profession, campho-phenique seems to possess desirable properties. It is a compound resulting from the chemical union of crystallized carbolic acid and gum camphor; is a brilliant, limpid, volatile fluid; specific gravity, 0·9919; aromatic, not unpleasant, with a decided camphor odour, insoluble in water, mixes readily with alcohol, ether, and fixed oils; fluid under extreme cold; is antiseptic, anæsthetic, and parasiticide. Applied to mucous membranes, it causes temporary warmth, followed by anæsthesia. It has over 50 per cent. of carbolic acid, which, in combination with camphor, loses its caustic, but not its germicidal properties. As a parasiticide it does not equal corrosive sublimate, or carbolic acid, but its analgesic properties render it valuable and available. The writer records cases of cancer of face, psoas and other chronic abscesses treated with dilute (in 3 or 4) campho-phenique solution Greater success, however, is claimed for its use in recent surgical injuries in an undiluted state. It is recommended in gynæcology and as a local application for catarrhal conditions of the fauces and nasal passages. For the latter purpose a one to four solution is used in the form of spray. Rapid cure is

reported in a case of diphtheria. Three cases of phthisis are mentioned. Under treatment of this drug, by deep inhalations of the spray, improvement was observed in two of the patients, while the third appears to have been hopeless from the first. The author claims that the value of campho-phenique consists in the facility of its subdivision by a hand-atomizer, and in its germicidal and analgesic properties.

RICHARD NEALE, M.D.

625. *Schneck on Catalpa Speciosa.*—Genus Catalpa is represented by two trees, hitherto regarded as identical. They are *C. bignoniodes*, of the Eastern and Southern States, and *C. speciosa*, of the Middle or Central States. This paper deals with the latter. There has always been a prejudice against the tree on account of its supposed poisonous properties, which the negroes were affirmed to use for criminal purposes. Kämfer and Thunberg state that an allied species in Japan furnishes pods useful in the treatment of asthma and bronchitis. The author made a number of experiments, both on himself and on a friend, a man of excellent mental attainments. A tincture was used, made by maceration from the inner or live bark of the root and body of the tree. The following deductions are drawn:—1. That with drachm doses of the tincture, unless continued for a considerable time, the system is but slightly affected. 2. That if taken in large enough doses it will slow the heart-beats, weaken its action, and finally produce an intermittent pulse. 3. That it acts on the alimentary secretions, producing a mild cholagoque, cathartic effect. 4. That in sufficiently large doses it produces nausea, and probably, in still larger doses, vomiting. It is probable that in this way it acts beneficially in asthma and bronchitis. 5. That by its sedative action on the heart it acts as an antipyretic. Clinically, Dr. Schenck has found it most useful in those cases of pneumonia where the alimentary secretions were inactive, along with rapid and full pulse. It reduces arterial tension and increases biliary secretion. Two drachms may be given every one to three hours. Analysis of the seed has shown a resin, tannin, sugar, a fixed oil, and two undetermined crystalline bodies.

DAVID WALSH.

626. *Kumps on Hypodermic Injections of Ether in Neuralgia.*—The author has recently strongly recommended this treatment in all cases of neuralgic and rheumatoid pains, and while admitting that these pains are sometimes alleviated by a simple injection of water, he states that the cases he describes were quite different in character, and of great severity. On account of the extremely volatile nature of pure ether, he prefers to make use of Hoffmann's solution, which consists of equal parts of ether and alcohol, and the dose employed is one gramme, equivalent to the contents of a Pravaz hypodermic syringe. The injection is made as near as possible to the seat of pain, or to its point of irradiation, and it causes some local suffering, which is, however, of but short duration, and some temporary swelling, which it is well to dissipate by gentle friction. Among other cases cited by him are the following:—A neuralgia of the shoulder, which for a fortnight had prevented sleep, and had resisted a great number of internal and external remedies, was cured by a single injection. Another case of the same nature and situation, and of several months' duration, was completely cured by one injection. Two cases of torticollis were cured by a single injection. Two cases of sciatica: considerable improvement after one injection, and in one of them complete cure after the fifth. Three rheumatic neuralgias of the head, and two facial neuralgias. The favourable effect of ether on gastric troubles was shown in the case of a patient suffering from generalised rheumatic symptoms, with gastro-hepatic derangement, and continuous and painful efforts at vomiting. This latter symptom, which had lasted twelve hours, ceased a quarter of an hour after the injection. The writer suggests that the treatment should be tried in the severe suffering of hepatic colic, in which cases ether given internally has been already recommended.

WM. A. FITZGERALD, M.D.

627. *Chapin on the Treatment of Diarrhœa in Early Life.* — In discussing the treatment of infantile diarrhœa, Dr. Chapin says that the greater the attention paid to the hygienic and dietetic management of the patient, the less will be the need of purely medical treatment. Still, much good can be accomplished by the proper use of drugs. Many physicians favour the so-called antiseptic treatment, which aims at checking fermentation along the intestinal tract by the administration of antiseptic drugs. But, says the author, it is impossible to render the intestinal canal antiseptic. Good effect may be obtained by the use of antiseptics; but it must be remembered that these agents are, as a rule, more or less irritating in character. Bichloride of mercury, salol, and naphthalin are types of this class; and when the author has given them a trial, he has always returned to one drug, the subnitrate of bismuth, which, he says, "is worth more than all the others put together." While bismuth may not be strongly antiseptic, it makes up for the lack in being *soothing*. It is not absorbed, and hence can safely be given in large doses. By the soothing action of bismuth, the excessive irritation of the mucous membrane, a most important factor in keeping up diarrhœa, is partially remedied. The addition of pepsin, by aiding digestion, assists in promoting recovery. The use of alkalies is theoretically indicated in many of these cases, and practically is attended by good results. The principal seat of catarrhal lesion in many cases of diarrhœa is the small intestine, which is congested and contains an undue amount of mucus, together with particles of undigested food. This being the case, we must aim to neutralize acidity and liquefy the mucus by the free administration of bicarbonate of soda or other alkalies, usually in combination with the bismuth. Some forms of subacute diarrhœa and indigestion are improved by the administration of small doses of dilute muriatic acid, which serves to aid digestion and tone up the mucous membrane. The bismuth and pepsin can be combined with the acid to form one prescription. There appears to be somewhat of a reaction against the prescribing of opium in cases of infantile diarrhœa. If the bowels are locked up by an opiate, and still contain masses of undigested food, the results will be disastrous. Still there are cases in which a glandular irritation of the intestine persists after the bowel has been cleared and a proper diet substituted. The astringent and sedative effects of small doses of opium will be here very valuable. While it may not often be necessary to use opium, if other indications are carefully followed, this agent may yet be held in reserve and serve a useful purpose. In the severer forms of infantile diarrhœa the administration of alcohol, in the form of whisky or brandy, is esteemed by all. By thus beginning early in the attack to steady the heart and revive the patient, the danger of spurious hydrocephalus later

on will be reduced to a minimum. In all cases there must be a careful restriction of diet to sterilized milk properly diluted with a free allowance of water.

628. *Gluck on the Prevention of the Toxic Effect of Cocaine.*—In eye and ear practice Dr. Gluck has found the toxic effect of cocaine, especially in adults of middle life, a great drawback to its use. Another inconvenience is that simple solutions of cocaine do not remain stable. After twenty-four hours a solution begins to lose its anæsthetic properties, and in a few days he finds that it becomes useless. After a series of experiments the author has found that by combining phenol with cocaine the objectionable features are removed. For over a year he has used a solution made according to the following formula, since which he has not observed any toxic effects of the drug: ℞. phenol, gtt. ij.; aqua destillata, ʒj.; shake until solution is perfect, then add cocaine hydrochlorate, gr. x. The advantages Dr. Gluck claims for this combination of cocaine and phenol are: toxic effects prevented; anæsthetic effect increased; absence of congestive reaction; decomposition of the solution prevented; and, lastly, solution rendered aseptic.

629. *Fackler on Calomel as a Diuretic.*—In cases of heart-disease, attended by œdema, Dr. Fackler has found great relief afforded by full doses (3 to 4 grains) of calomel. His clinical experience of the use of mercury leads him to the following conclusions:—(1) That calomel and, in all probability, other mercurial compounds possess diuretic action. (2) If given in proper doses, the effect of calomel becomes evident from the second to the tenth day. Continuation of the treatment during diuresis will not alter or increase the effect. (3) Its action is most marked in dropsies due to heart-disease. In dropsies of hepatic origin its action is not to be relied upon. (4) Small doses are of no avail. (5) The diuretic action, in all probability, is due to the irritating effect which mercury exercises during elimination upon the renal epithelium. GEORGE BROWN.

630. *Mairet on the Physiological Action of Chloralamide.*—The author carried out a series of observations in respect to the action of chloralamide on the heart. It is claimed for this hypnotic of recent introduction that it has no effect on the cardiac beat, comparable to that of chloral. He has satisfied himself, however, that in whatever dose it is given, large or small, the pulse-rate promptly undergoes a marked and immediate acceleration. At the same time, there is flushing of the head and face. Another observation of note is the supervention of a period of excitement after the ingestion of chloralamide.

631. *Gley on the Poisonous Properties of Chloral-antipyrine.*—There are two well-defined compounds of chloral and antipyrine—the monochloral-antipyrine, containing 47 per cent. of chloral and 53 per cent. of antipyrine, and the bichloral-antipyrine, containing 66 per cent. of chloral and 34 per cent. of antipyrine. Injected into the veins of animals, both these bodies prove fatal in the same quantity (about 1 in 1,000 of the body weight), and both have the same physiological action as chloral. Theoretically, the monochloralantipyrine ought to be the less poisonous, seeing that it contains less chloral; but this does not appear to be the case. In all probability, the compounds thus formed have properties which are not to be gauged by their constituents, a very frequent result in chemistry. ALFRED S. GUBB.

632. *Zongolowicz on the Treatment of Gastro-Intestinal Affections.*—Dr. Danil L. Zongolowicz (pron. Jongolovitch, a Polish name), of St. Petersburg, most emphatically recommends the following (rather polypharmacal) formula for treating dyspepsia, intestinal atony, and even chronic gastric and intestinal catarrhs:—℞. Herbæ hypericis perforati; foliorum trifolii fibrini; radicis gentianæ; caryophyllorum; florum tanaceti vulgaris; radicis angelicæ; baccarum rhamni cathartici; gemmorum betulæ; herbæ menthæ piperstæ; et herbæ salviæ ana; spiritus vini Iq. sat. ut f. lege artis tinctura. D.S.—To take from twenty to forty drops before or after meals. The remedy is borrowed of the Russian popular medicine. According to the author's experience, "it affords decidedly the best yet known means for improving digestion." Hence he suggests introducing the tincture under some appropriate name into pharmacopœas.

633. *Geissler on Hot Enemata in Typhoid Fever.*—Following the suggestion by Professor I. T. Tchüdnovsky, Dr. Theodor K. Geissler, of St. Petersburg, has undertaken an experimental inquiry into the action of hot enemata on patients suffering from enteric fever. In all, five cases (referring to males, aged from 15 to 29) were selected for the purpose, each experiment lasting eight days, and being divided into two periods of an equal duration, during one of which the patients received daily (at 11 a.m.) an enema made of 1 litre of water at 34° R. (108·5° F.). The essential outcome of the researches may be given as follows:—(1) Hot enemata manifest a very favourable influence on the intestinal tract in typhoid fever. In cases of diarrhœa, they markedly diminish the frequency of stools and improve their quality, the fæces becoming less mucoid. The injections relieve abdominal pain, when present, and also produce a beneficial action on constipation. (2) Immediately after an enema, the bodily temperature, as a rule, slightly rises (the maximum elevation observed being about 0·2 C.), which phenomenon is probably dependant upon a "compensatory constriction of peripheral blood-vessels." When examined an hour later, it proves to be either stationary, or even lowered, comparatively with the primary temperature (*i.e.*, before the enema). (3) In the long run, the injections seem to promote defervescence, or, at least, the transformation of a continuous fever into a remittent or intermittent one. (4) Immediately after an enema, the frequency of the pulse commonly somewhat decreases, to increase by the end of an hour. At the same time, the pulse becomes firmer and fuller, its dicrotism less pronounced, the cardiac contractions more vigorous. (5) The respiration usually quickens, to become slower in an hour or so. (6) The blood-pressure distinctly rises. (7) The daily amount of urine mostly increases, while sp. gr. sinks. (8) Cutaneous and pulmonary aqueous losses (as determined after Sanctorius's method) appear to be diminished. (9) The enemata are invariably borne perfectly well, the patients being rather pleased with them. The sensation of well-being is always distinctly improved. As a rule, the injection is retained by the patient from twenty to thirty minutes, a slight "call" being experienced in the course of the first two or three minutes, to gradually subside subsequently. [A paper on "The Effects of Hot Enemata," published by Dr. D. N. Jankowski, may be found in the LONDON MEDICAL RECORDER, May, 1890, p. 167.]

VALERIUS IDELSON, M.D.

Gynæcology and Obstetrics.

RECENT PAPERS.

634. Alderson, Dr.—On Placenta Prævia. (*Prov. Med. Jour.*, June, 1890.)

635. Haultain, Dr.—On Exfoliation of the Bladder in the Female. (*Edinburgh Med. Journal*, June, 1890.)

636. Tabar, Dr.—On a Remarkable Case of Recovery after Rupture of the Uterus. (*Bulletin, Med.* June 11th, 1890.)

637. Martin, Dr. F. H.—On Early Vaginal Hysterectomy for Cancer of the Uterus. (*New York Medical Record*, May 31st, 1890.)

638. Cheeseman, Dr. W. S.—On Recovery in a Case of Sloughing of a Fibro-Myoma of the Uterus. (*Medical Record*, N.Y., June 21, 1890.)

639. Hooper, Dr.—On a Case of Fibro-Myoma and Retroflexion of the Gravid Uterus. (*Australian Medical Journal*, vol. xii., No. 4.)

Art. 634. *Alderson on Placenta Prævia.* — Dr. Alderson contributes an account of two cases of placenta prævia, in both of which hæmorrhage was arrested for a time by administration of a mixture containing ergot, sal volatile, and bromide of potassium, the resort to premature delivery being thus delayed for some time. Irrigation of the vagina with hot water was also found of service as a restrainer of the bleeding; and in both cases portions of the presenting placenta were removed during examination at different times; and the free removal of accessible portions is a procedure advocated by the author as a reliable method of practice. Both Dr. Alderson's cases made a good recovery, the children, of course, being stillborn.

635. *Haultain on Exfoliation of the Bladder in the Female.*—An exceedingly interesting and very rare case of so-called exfoliation of the vesical mucous membrane is described by Dr. Haultain, the subject being a woman aged 27 years. The patient suffered from retention of urine, due mainly to the presence of a mass within the bladder, but protruding at the urethra, its measurements being 14 by 7½ inches at its broadest diameters, and in thickness a fifth to an eighth of an inch. Microscopical examination showed the substance to possess a truly membranous structure, three layers, a crystalline granular, transverse muscular and longitudinal muscular tissue being recognisable. At one point, a portion about one and a half inches square exhibited a smooth white glistening aspect, and here there were superadded an old and a new connective tissue-layer. On the evidence afforded by careful examination of the membrane, Dr. Haultain maintains that it consists of the entire thickness of the bladder-wall in a state of hyoline necrosis, the white part observed in his case consisting of attached peritoneal covering. He insists, therefore, on the inapplicability of the term "exfoliation of mucous membrane" applied to such cases, under which name similar examples to his own have been described by several other writers. The causation of the disease he attributes to circulatory disturbance due to retention of urine or labour, these being, one or other, the two concomitants of all the cases hitherto recorded.

Charles H. Wade.

636. *Tabar on a Remarkable Case of Recovery after Rupture of the Uterus.*—The patient was a pregnant woman with a deformed pelvis, which offered an effectual barrier to the downward progress of the fœtus. When called to see the patient, her general condition was critical, and Dr. Tabar, by palpation, made out a rupture of the uterus, and proposed laparotomy. This was refused, and he was obliged to wait twenty-four hours before attempting extraction by version. The trunk was brought down without difficulty, but the head remained fixed, and had to be separated from the body. Leave was then obtained to open the abdomen. On doing so, he found the head lying free in the peritoneal cavity, but he was astonished not to be able to find the uterus itself. After a somewhat prolonged search, he finished by identifying it, tucked away under the liver, having been completely torn from its vaginal attachments. The only remaining connections with the pelvis were the Fallopian tubes and a few shreds of the broad ligaments. The uterus was intact, and the cervix was easy to recognise. Although he despaired of the patient's life, he replaced the organ in its proper position, suturing the peritoneum to that covering the uterus. As this took place in the country, no antiseptic precautions were possible (!) The most remarkable fact in connection with this accident was the uninterrupted recovery of the patient.

Alfred S. Gubb.

637 *Martin on Early Operation in Cancer of the Uterus.*—At the forty-first annual meeting of the American Medical Association, recently held at Nashville, Dr. F. H. Martin introduced as a subject for discussion the operative treatment of cancer of the uterus, and he laid down the following propositions:—(1) That vaginal hysterectomy is the most justifiable surgical procedure we know as yet for cancer of the uterus. (2) That vaginal hysterectomy, for the cure of cancer of the uterus, should be attempted at the *earliest* possible moment after the disease is diagnosed. In his opinion, the operator can remove the entire disease by vaginal hysterectomy in a greater proportion of cases than by any other surgical procedure. Moreover, the operator can venture to go further beyond the diseased tissue into healthy tissue than he could by other methods. He anticipates that, in future vaginal hysterectomy will show an immediate mortality not exceeding 10 per cent. in the hands of general surgeons, whilst in the hands of experts the mortality will not be more than 5 per cent.

George Brown.

638. *Cheeseman on Recovery in a Case of Sloughing of a Fibro-Myoma of the Uterus.*—The patient, aged forty-nine years, mother of three children, had suffered, to Dr. Cheeseman's knowledge, from uterine fibroid for five years, and another physician had discovered the tumour two years previously to that. The tumour filled the abdomen to a finger's breadth above the umbilicus, and caused much cystic irritation, pain in walking, and menorrhagia. A probe entered the uterine cavity to a depth of nearly five and a half inches, being deflected to the left. The tumour seemed to occupy the fundus and right-hand wall. No pedunculation could be demonstrated. Early in Oct., 1889, she was seized with severe hæmorrhage, which was arrested by the vaginal tamponade. After this, her temperature began to rise; and the vaginal discharge, which previously had been merely a free leucorrhœa, became abundant and offensive. The high temperature continued, reaching in the afternoon 103° or 104° F.,

the discharge, in spite of antiseptic douches, becoming more abundant and malodorous. Dr. Cheeseman felt sure that in consequence of her low vitality the tumour was sloughing, and in the hope of assisting in its extrusion, administered half-drachm doses of fluid extract of ergot, every two hours. The uterus reacted to the drug, but the discharge suddenly ceased and the temperature rose to 105°. The next day, a mass about the size of a Seckel pear was expelled. A repetition of the ergot was followed by a similar cessation of discharge, rise of temperature, and extrusion of a slough. Smaller doses of ergot were subsequently administered, and fragments and shreds were discharged in the fetid pus which poured from the uterus. On November 25, 1889, Dr. Cheeseman administered ether, and dilated the cervical canal with Barnes' dilators, in order to explore the cavity of the uterus. The cavity was found to be enlarged, but not perceptibly encroached on by the tumour. When the body of the womb was pressed down by one hand on the abdomen, the finger detected a circular opening in the roof, about as large as a fifty-cent piece. Within the rim of this opening the finger could be swept round, between the body of the tumour and the uterine wall, but no sign of further separation could be made out. It did not seem to Dr. Cheeseman that the patient, exhausted as she was by previous bleedings, and by septic absorption and fever, was in a condition for attempting to enucleate this necrosing tumour. A few loose fragments only were therefore curetted away. After this, the daily extrusion of small fragments went on under the use of ergot. The patient, however, perceptibly lost ground. On December 27, a large, ragged, and intensely fetid slough was passed into the vagina and removed. Two days later a similar fragment was passed, and after this the temperature rapidly subsided, and never rose again. The discharge gradually lessened, and the odour disappeared. The patient began to improve, and in less than a month was able to sit up. An examination made late in January, 1890, showed the uterus natural in size, light, moveable, and free from tenderness. There was no trace of the tumour which formerly filled the lower part of the abdomen. The patient recovered perfectly in health and strength.

639. *Hooper on a Case of Fibro-Myoma and Retroflexion of the Gravid Uterus.*—The patient was 36 years of age, had been married ten months, and believed herself to be at full time. She had suffered for many years previous to her marriage with dysmenorrhœa and constant back-ache, but without any floodings. The labour commenced at noon on December 13th; the membranes had ruptured at 7 p.m. on the 14th. When seen by the author at 11 a.m. on the 16th she was still in labour, with feeble, though regular, pains, and she was much exhausted. Pulse, 110, weak. On inspection the abdomen appeared unusually small for full term. The fœtal parts were felt distinctly through the parietes, and the heart was beating 130 to the minute, low down in the right iliac fossa. The uterus reached only to three inches above the umbilicus, and at its upper and anterior extremity a non-pedunculated fibroid could be felt about the size of a hen's egg. A careful examination was then made under chloroform. The vagina was short, dry, and hot: the finger impinged on a hard, conical tumour, the apex of which was blunted, and directed downwards and backwards. The posterior vaginal wall moved freely over it. Higher up another tumour, larger, though not so hard, could be felt. On following the larger tumour upwards, about two inches above the pubic arch, the thin edge of the external os was felt. It was directed forward, and dilated to the size of a shilling. No presenting part whatever could be reached. Dr. Hooper's conclusion was that the first object reached per vaginam was a fibromyoma of the fundus uteri at its lowest part, and that a portion only of the fundus was retroflexed, and contained the head of the fœtus, while the trunk was lying obliquely in the maternal pelvis. For two hours attempts were made by all the approved methods to replace the retroflexed portions, but the dependent fibroid prevented the fundus from passing the sacral prominence. Even after dilatation no part of the fœtus suitable to assist in turning, craniotomy, or evisceration could be felt. It was determined, therefore, to perform Cæsarian section, and after the patient had had some rest and stimulants this was done with the usual antiseptic precautions, and the child gave but one feeble cry. The placenta was situated centrally and above, and was untouched by the knife; but the wound in the uterus traversed one of the tumours and bled most profusely. It was sewn up with kangaroo tendon, a wedge-shaped piece being first removed from either side of the uterinal wound, otherwise the cut fibroid would have prevented close apposition. The whole operation lasted thirty-eight minutes; and the patient rallied well at first, but gradually grew weaker, and died seventy-one hours after the operation. The abdomen kept flat, and the wound was dry and healthy, while from the vagina the ordinary slight lochia flowed. No *post-mortem* examination could be obtained. The author concludes by indicating the following points of interest in the case:—(1) The occurrence of impregnation immediately after marriage in a uterus affected with retroflexion and a fibroid tumour; (2) the rare association of incomplete retroflexion of the gravid uterus with myoma; (3) the continuance of gestation to full term and the absence of vesical troubles. (The case is probably unique. Possibly Porro's operation would have had more chances of success.—*Rep.*)

RALPH W. LEFTWICH, M.D.

Diseases of the Nervous System.

RECENT PAPERS.

640. GILLIS DE LA TOURETTE, DR.—On the Treatment by Suspension of Locomotor Ataxy and of some other Diseases of the Nervous System. (*Progrès Médical*, June 7, 1890.)

ART. 640. *Gillis de la Tourette on the Treatment by Suspension of Locomotor Ataxy and some other Diseases of the Nervous System.*—The writer, who was formerly chef-de-clinique in the service of Professor Charcot, reviews two recent communications to the Medical Society of Berlin, by Guttmann and Rosenbäum (21 April and 5 May, 1890), and points out how remarkably the results obtained agree with those of the French professor. An analysis of 100 cases of ataxy, in the middle period of the affection, treated by suspension in Charcot's clinic, gives the following results:—25% show a very marked improvement as regards almost all the symptoms, especially the lightening pains, motor inco-ordination and genito-urinary troubles, but without any change in the ocular symptoms or in Westphal's sign; 30 to 35% show an improvement in some of the symptoms; negative results for the remainder of the patients. The number of suspensions in each case seems to have been from 20 to 30, and the mean duration, varying with the weight of the patient, three minutes. The writer has never seen any serious accident occur in the course of over 10,000 suspensions at the Salpêtrière, and he strongly recommends a modification by Motchowkowsky of Sayre's apparatus, which consists in the chin-piece being moveable, and capable of being shortened or lengthened. Guttmann treated ten cases of ataxy. In three the result was negative, but in five there was marked improvement; while Rosenbäum, in 61 cases similarly treated in the polyclinic of Professor Mendel, found five cases markedly and persistently improved, 20 improved, in nine the result doubtful, while in the other 27 it was *nil*. Almost all the cases of paralysis agitans treated by suspension in Charcot's clinic, especially those who had not reached a very advanced period of the affection, derived benefit, shown more especially in an improvement in general health, in better sleep, and in a great decrease with phenomena of painful rigidity. The results of suspension in sciatica seem not to have been very remarkable, although, in the words of the writer, "encouraging."

Wm. A. Fitzgerald, M.D.

Pathology.

RECENT PAPERS.

641. Kiwull, E.—On Congenital Hypertrophy of one Half of the Face. (*Fortschr. der Med.*, 1890, *Bd.* 8, No. 4. *Central bl. f. Allgem. Path.*, *Bd.* 1, No. 13, s. 421.)

642. Bard and Curtillet—On the Pathology of Cyanosis, especially the form late developing. (*Centralb. f. d. med. Wiss.*, No. 18, 1890.)

Art. 641. *Kiwull on Congenital Hypertrophy of one Half of the Face.*—The condition above mentioned is of extreme rarity, only five cases having up to the present been recorded. The case described in this paper was that of a girl of 18 years, belonging to a healthy family. The asymmetry of the two sides of the face was obvious at birth; the increase in size of the right side of the face took place in correspondence with the development of the girl, and reached a remarkable pitch. The girl was in other respects normally developed, both physically and mentally. The asymmetry affected the forehead, and especially the right cheek, which formed a colossal tumour, which, above, almost closed the right eye, and reached below, and to the right to the nose and the angle of the mouth. The lip on the right side was three times as thick as on the left; the right side of the tongue was also hypertrophied. By means of palpation it was observed that the hypertrophy also affected the bones. A portion excised from the upper lip was microscopically examined, the result being to show that the hypertrophy was due to an increase of the fatty and connective tissues. There was no evidence of inflammation.

Bertram C. A. Windle, M.A., M.D.

642. *Bard and Curtillet on the Pathology of Cyanosis, especially the form late developing.*—A gap (in the fossa ovalis) in the cardiac septum atriorum, is no great rarity. A "foramen Botalli" is by no means infrequent on the *post-mortem* table. There may have been no symptoms during life, no cyanosis, and no heart-troubles; in other cases the affection, hitherto patent, may show itself suddenly in subsequent years. In explanation of this sudden development of cyanosis, the authors go back to the development of the fossa ovalis. From this, and from the oblique course of the passage between the two auricles in fœtal life, it results that when the blood-pressure in the right auricle is higher, as in fœtal life, the communication remains open; but when the blood-pressure is higher, as at birth, when the lesser circulation through the lungs is established, closure results. From this it follows that if this physiological relation be reversed from some pathological cause, the hitherto latent opening, supposing its existence, may suddenly become patent. Thus, on the one hand, the autopsy of a man, ætat. 47, who had shown no cardiac symptoms whatever during life, revealed an opening admitting the finger; here the pressure in the left auricle, already high, had been raised by the development of mitral insufficiency. On the other hand, a man, ætat. 54, had a foramen Botalli which had remained, hitherto, without symptoms, but which caused a sudden and extreme cyanosis, and a diastolic murmur in the third left intercostal space near the sternum, when, in consequence of double broncho-pneumonia, and increased blood-pressure in the lesser circulation, the pressure in the right auricle was raised with dilatation also. A few similar reported cases as this are thus explained. This late form of cyanosis is characterised by its rapid onset, whilst in the slowly developing "congenital cyanosis," other lesions are always found there besides the inter-auricular opening, viz., incomplete development of the septum, narrowing of the pulmonary artery, right-sided origin of aorta, &c. As to the cause of cyanosis with a foramen Botalli, there are two opposite explanations, viz., the general circulatory difficulty with overloading of the venous system, and mixture of the blood of the two sides of the heart. The authors seek to reconcile the advocates of the two different views; in any case direct mixture can only occur when, owing to very high pressure in the right auricle, blood passes thence into the left auricle direct through a previous opening.

E. J. Edwardes, M.D.

Bacteriology.

RECENT PAPERS.

643. Zongolowicz, Dr. Danil L. — A Contribution to the Study of the Pathogenic Micro-organism of Trachoma. (*St. Petersburg Inaugural Dissertation*, 1890, No. 48, p. 50.)

644. Wittram, Dr.—A Bacteriological Contribution to the Ætiology of Trachoma. (*Dorpat Inaugural Dissertation*, 1889, p. 41.)

645. Lehmann, Prof. K. B.—On the Germicidal Action of the fresh Urine of the Healthy Man. (*Centralbt. f. Bakteriologie*, vol. vii., No. 15, April 5, 1890.

646. Krueger, Dr. R.—On Pyogenic Micro-cocci in Milk. (*Centralbt. f. Bakterologie*, vol. vii., No. 19, May 3, 1890, p. 590.)

647. Huguenin, Dr.—On the Methods of Infection in Meningitis. (*Cor. blate für Schweizer Aezte*, No. 22, 1889.)

Art. 643.—*Zongolowicz on the Bacillus of Trachoma.*—Dr. Danil L. Zongolowicz (pron. Jongolovitch; a Polish name), of St. Petersburg, furnishes an interesting contribution to the bacteriology of trachoma, which will, probably, lead to renewed controversies on the subject. The material for his researches (conducted in Prof. N. P. Ivanosky's laboratory) was derived from twenty-six patients, with typical trachoma, and consisted of (*a*) contents of the follicles, pressed out by means of a special forceps; and (*b*) strips of intermediary fold of the conjunctiva, cut out with scissors (both of the operations being conducted under all antiseptic or sterilising precautions, and made painless by cocaine-injection). The summary of the most salient facts obtained by the author may be briefly given as follows:—(1) Both follicles and diseased conjunctival tissue in trachoma invariably contain a characteristic rod-shaped bacterium, which differs from all yet known pathogenic and non-pathogenic microbes in many morphological and biological properties. (2) The best method for detecting the presence of the bacilli in follicles is this:—The mass pressed out from the latter is spread in a thin layer over a cover-glass, dried in the air at the ordinary room-temperature, thrice passed through a lamp's flame, and then immersed into a freshly prepared and heated (until the appearance of steam) solution of gentian-violet, made of 100 cubic centimetres of aniline-water, 11 cub. cc. saturated alcoholic solution of gentian-violet, and 10 cub. cc. of alcohol. After the lapse of fifteen minutes, the glass is thoroughly washed out in distilled water (for about fifteen minutes); then placed for three minutes in Gram's fluid, diluted with an equal part of distilled water; subsequently decolourized with aniline-oil, washed out in bergamot-oil (to remove aniline-oil), then in xylol, to be mounted finally in Canada balsam. When treated in such way, the specimens invariably show a large number of the bacilli, which lie either isolated or grouped, mostly amidst leucocytes, but occasionally within the latter. (3) The following is the best way for demonstrating the presence of the bacteria in diseased conjunctival tissue:—An excised fold of the membrane is placed consecutively into (*a*) a 95 per cent. alcohol (for 24 hours or more); (*b*) absolute alcohol (one hour); (*c*) oil of cloves (24 hours); after drying with blotting-paper, into (*d*) pure xylol (one hour); (*e*) a saturated solution of pure paraffin in xylol (two hours, at 40° C.); (*f*) melted pure paraffin (one or two hours, at 52° C.). Then slices—each 0·01 millim. thin—should be prepared, spread on cover-glasses (previously thinly coated with an alcoholic solution of white shellac), heated up to 52° C., thoroughly washed out with xylol (to remove paraffin), and stained by consecutively immersing into (*a*) the solution of gentian-violet (*vide* sub. 2) for 24 or 48 hours; (*b*) distilled water (for washing out); (*c*) Gram's fluid diluted with an equal part of distilled water (for three or five minutes); (*d*) aniline-oil; (*e*) bergamot-oil. Under the microscope, the slices (mounted in Canada balsam) prove to consist of four layers:—(i) epithelium; (ii) proper conjunctival tissue; (iii) lymphoid tissue (follicular and diffuse); and (iv) loose vascular sub-conjunctival tissue. Each of the strata always contains a number of the bacilli, which are most abundant in the sub-conjunctival tissue, where they are seen either scattered or grouped, lying in leucocytes or connective-tissue slits, while in the three upper layers they are invariably lodged in leucocytes alone. (4) The trachoma-microbe represents isolated short rods with rounded ends, measuring from 0·75 to 2 μ. in length, and from 0·3 to 0·5 μ. in breadth, and possessing fairly lively motion. The ends of the bacterium take in dyes better than its body. The micro-organism is an aërobe growing on jelly, agar-agar, potato, and blood-serum, both at the ordinary room temperature and that of the body. On the whole, its growth is rather slow; on agar-agar, however, it proceeds more quickly than on gelatine. On the latter the bacillus forms isolated minute white colonies along the needle-track. On the surface of a 5 per cent. jelly there develops a yellowish-white, circular, granular film, which, in the course of time, increases both in thickness and width, but never reaches the test-tube's walls. On the surface of a 10 per cent. jelly, the growth remains very scanty, the colonies forming a grayish, semi-translucent, granular, slightly elevated patch. The microbe does not liquefy the medium. On agar-agar, the needle-track becomes studded with isolated grayish-white minute colonies; while on the surface there appear similarly isolated delicate whitish films, which consequently coalesce into a shining yellowish-white elevated mass with a greenish tint. On potato the bacteria form a yellowish-white granular coat. In blood-serum they give a scanty precipitate of grayish-white colour. (5) The inoculation of pure cultures of the microbe into the conjunctiva in cats and rabbits sometimes gives rise to an affection resembling human trachoma. [As a matter of fact, the effect was obtained in one of five rabbits, and in one of two cats experimented upon. In the remaining four rabbits and one cat, as well as in two dogs, four pigeons, one guinea-pig, and two white rats, the inoculation produced only temporary congestion and tumefaction of the conjunctiva. Hypodermic and introperitoneal inoculations in two white rats, one guinea-pig, and one rabbit caused some local reaction, but no constitutional effects.] (6) The bacillus constitutes, probably, *the* pathogenic principle of trachoma. [The results arrived at by Dr. Zongolowicz are the more puzzling that, up to the present, only various *micrococci* were brought forward as the pathogenic microbe of trachoma by all his predecessors. The latter are Sattler, Koch. Michel, E. E. Schmidt (*vide* the *Medical Record*, April, 1887, p. 166, and the *Medical Chronicle*, June, 1888, p. 246), J. G. Kükharsky (the *Sei-I-Kwai Medical Journal*, Oct. 1888, p. 165), Ossovsky (*ibid*), Goldschmidt (*Centralblatt fuer Kzinische Mediüin*, 1887, No. 18), Vajëëvsky (*Voënno-Meditzinsky Jürnal*, Oct. 1887), Staderini (*Annali di Ottalmologia*, 1888), Schmidt-Rimpler (*Transactions of the Seventh International Congress of Ophthalmologists*, 1888, p. 395).—*Reporter*.]

644. *Wittram on the Bacteriology of Trachoma.*—Dr. Wittram, of Dorpat, examined bacteriologically conjunctival discharge and contents of follicles from thirty-nine cases of trachoma. He succeeded to obtain the following four species of micrococci in the state of pure cultivation. (1) A milk-white coccus, not liquefying jelly; (2) a similarly milk-white coccus which liquefies the medium in the course of time; (3) an orange-yellow one, which does not liquefy gelatine; and (4) a yellow one which liquefies the medium after the lapse of two days. The injection of all the microbes into the anterior chamber of the eye in rabbits and the inoculation to the conjunctiva in man gave invariably negative results. The author arrives at the conclusion that all microbes yet found (by him or other observers) in trachoma cannot possibly be recognised as a pathogenic principle of the affection.

VALERIUS IDELSEN, M.D.

645. *Lehmann on the Germicidal Action of the fresh Urine of the Healthy Man.*—In this paper (2½ pages) Professor Lehmann gives a succinct account of certain

experiments made in his laboratory by himself and Dr. Erich Richter, during the last summer and winter, upon the germicidal action of fresh and healthy urine. Anthrax and cholera bacilli were the micro-organisms used upon which to test the action. The plan of experiment was as follows:—50 ccm. of freshly-passed urine was mixed with 1 cm. of a 24-hours-old broth-culture of the organism used, and 1 ccm. of the mixture was then poured into one or two agar-agar, counting plates. After one, two, and twenty-four hours respectively, during which time the preparations were kept in the incubator at about 30° C., the colonies which had appeared were counted. By these means it was proved that the numbers of colonies in the plates at twenty-four hours were very greatly diminished. In order to ascertain whether the germicidal property of the urine depended upon the phosphates, either acid or basic, which it contained, control experiments were made. These shewed that a somewhat stronger solution of a mixture of phosphates than is contained in urine had the same effect as the urine, whereas a weaker solution of acid phosphate was not so effectual as urine. The experimenters therefore concluded that the urine exercises germicidal qualities in proportion to the amount of acid phosphate of potassium which it contains. Neutralized urine, in the majority of cases, was found to possess no germicidal properties. One research, however, appeared to shew that there is something in the urine besides acid phosphates which are germicidal in-action. This is, possibly, the chloride of sodium; at any rate, it did not seem to be connected with the absorbed carbonic acid gas, nor yet with the organic substances which it contains.

VINCENT D. HARRIS, M.D.

646. *Krueger on Micrococci in Milk.* — Dr. Krueger, of the Milk Laboratory of the University of Königsberg, gives an account of a peculiar sample of milk which was handed over to him for investigation in April of this year. It was of a dirty yellow colour, and the casein was separated in large and small flakes of yellowish colour and viscid. The reaction of the fluid was very sour, and the smell was rancid. It contained peptone, lactic and batyric acids, leucin, and tyrosin. On inoculation into rabbits to discover whether it contained tubercle bacilli, the presence of which could not otherwise be proved, in most cases abscesses were produced, but no tubercle. By plate and stroke cultures in gelatine, the presence of two sorts of micrococci was proved—(1) *Staphylococci*, 1μ in diameter, frequent diplococci, non-motils, anæsthic, forming a yellowish surface growth in puncture-cultures, whilst the puncture-canal remains unstained. Liquefying the gelatine in five days, so energetically as to cause its entire fluidity in ten days. The yellow overgrowth lay at the bottom of the fluid gelatine, whilst the supernatant fluid was quite clear. The organism grew in bouillon mixed with fuchsin very well, and took up the stain. It produced coagulation of sterilized milk in four days at 30°C, the coagulation being homogeneous, and lactic acid being formed. The coagulation was vidicrobed in ten days, and peptones and batyric acid being present, and a solution of milk-sugar, first of all lactic, and then butyric acid was formed. Solutions of the calcium salts of the fatty acids were unchanged. Morsels of white of egg were energetically peptonised into a pure batter; after a scanty growth for seven days the micrococci perished. (2) Also staphylococci, but larger; $1{\cdot}2\mu$ in diameter, anomatic and anærobic. In puncture culture it grows as a whitish grey, leaf-like surface growth; the puncture-canal being outlined and transparent. Liquefaction of the gelatine after six days and a foul smell. Fuchsin taken up out of fuchsin and broth mixture. No coagulation of sterile milk, but decomposition of the casein, H_2S and NH_3 being given off. It showed no peptonising growths, as did the first species of organism. In morphological and physiological properties the first species showed itself identical with the staphylococcas pyogenes aureus, and this confirmed the previous inoculation experiment, but to make assurance doubly sure, the experimentor performed a series of experiments by inoculation of animals with apine culture, and these in most cases supported the view that in the milk the staphylococcus progenes aureas was present. Inoculation experiments with the second species of organism was without result, the animals were unaffected. The staphylococcus progenes aureus had no doubt come from an inflamed udder, of which inflammation, it seems, was the cause. The undoubted presence of micrococci in milk is very important from a hygienic point of view, when one remembers that for the first months of existence cow's milk may be the entire food of the infant, and pyrogenic cocci, in some samples, is a danger which should not be minimised.

647. *Huguenin on the Methods of Infection in Meningitis.*—As to the origin of meningitis, Huguenin is inclined to believe that purulent meningitis of whatever kind is due to micro-organisms, whilst he supposes that seroas and fibrinous meningitis are due to another cause as yet unknown to us. From meningeal exudations the following bacteria have been up till now cultivated:—(1) *The staphylococcus pyogenes aureus;* (2) *The streptococcus pyogenes,* which the author agrees is identical with the erysipelcoccus; (3) The *bacillus meningitid* of Neumann and Scheffer, which resemble the typhoid-bacillus in many respects, but may be distinguished by its growth upon potatoes and its effects; (4) the *pneumococcus* Fraeakel-Weichselbaun; (5) the *diplococcus intercellularis,* which was found in cases of epidemic cerebro-spinal meningitis without pneumonia.

WEICHSELBAUN GOLDSCHMIDT.

Syphilography.

RECENT PAPERS.

648. VVEDENSKY, DR. ALEKSEI A.—Case of Syphilitic Chancre of the Temple. (*Voënno-Meditzinsky Jürnal*, December, 1889. p. 464.)

649. SOLOVIOFF, DR. ALEXANDR N.—On Hard Chancre of the Little Finger. (*Vratch*, No. 5, 1890, p. 124.)

650. HABDANK, DR.—On "Can we Prevent the Manifestation of Syphilis?" (*Centralb. f. d. med. Wiss.* 1890, No. 18.)

651. DURING, DR.—On the Early Treatment of Syphilis. (*Centralb. f. d. med. Wiss.* 1890, No. 18.)

ART. 648. *Vvedensky on Hard Chancre of the Temple.*—Dr. Alekséi A. Vvedensky, of St. Petersburg, records the following curious case:—An adult man, subject to Bright's disease, was admitted to the Kalinkinskaia Syphilitic Infirmary, on account of a soft chancre on the penis and several similar (autoinoculated) chancres on the left thigh. In six weeks, he was discharged, with the ulcers cured, but, twenty-six days later, returned as an out-door patient, with a primary syphilitic sclerosis in the left temporal region, and enlarged lymphatic glands in front of, below, and behind the corresponding ear. Shortly afterwards he sought admission to a general hospital, where his (quite typical) ulcer was diagnosed as a "broken furuncle," and treated as such, with warming compresses. On the forty-sixth day after the appearance of the chancre, characteristic roseoles cropped out over the body. The way of the infection remained obscure. [Very likely, the man had been in close contact with some syphilitic patients at the Kalinkinskaia Infirmary.—*Reporter*.] Referring to Dr. Vvedensky's case, Professor V. M. Tarnovsky, of St. Petersburg, says that he came across several cases of hard chancre of the scalp in soldiers who had contracted the disease through employing copper combs borrowed of some syphilitic mates of theirs.

649. *Solovioff on Hard Chancre of the Little Finger.*—Dr. Alexandr N. Solovioff, of St. Petersburg, communicates the case of a generally healthy man of 29, who, during a fight, was bitten by his adversary in the terminal phalanx of the right little finger, the nail being completely split up into two halves. The wound transformed into an ulcer, while about the fourth week there supervened a considerable enlargement of lymphatic glands of the limb. The lesion was treated by thermo-cauterisation, which made it worse. The nature of the affection remained unrecognised for four months, until the patient happened to seek advice of a well-known syphilidologist, on account of roseoles and other specific manifestations. Dr. Solovioff adduces the statistics of extragenital syphilis, published by Dr. Porai-Koshitz, of Kharkov, according to which fingers were the site of hard chancres in thirty-six cases out of 852.

VALERIUS IDELSON, M.D.

650. *Habdunk on "Can we prevent the Manifestation of Syphilis?"*—Induced by the supposition that loss of body-weight and rise of temperature precede syphilitic relapses, as well as the first constitutional symptoms, and also that this nutritional derangement may be expected if there be a discontinuance of the excretion of mercury previously given. Many authors advise a renewed course of treatment if loss of weight and rise of temperature occur. The author shows that the underlying supposition is erroneous. He questions whether the appearance or suppression of syphilitic symptoms should be taken to indicate definite cure of the disease; but it is more probable, rather, that by such measures the passage of elimination of the evil from the organism is only barred up. As a fact, we often see that patients who have had syphilitic symptoms for months before treatment, more seldom shew relapses than those who have once been treated with mercury on every new manifestation. Moreover, it is in accordance with this that late syphilitic disease of the central nervous system is most common amongst patients whose constitutional symptoms have been only slight than in the opposite case. The dreadful frequency of such patients, as observed by Fournier, is partly owing to mercury-treatment continued for years—indeed is sometimes its direct consequence. Treatment should occur only when the signs are undoubted—indeed it should be deferred till perfect evolution of syphilis in the skin and mucous membranes. Nothing is to be gained from "abortion" treatment.

651. *Düring on the Early Treatment of Syphilis.*—We are here warned not to begin general treatment before secondary symptoms are plainly manifest. For in the coronary tubers there arises, not infrequently, non-specific—a folliculitis or perifolliculitis—which in hardness may resemble a hard chancre for weeks. The mental injury inflicted on a patient by a premature and unfounded diagnosis of syphilis, causing him to be in continual fear of relapses all his life, stand in no relation at all to the very doubtful benefit of early treatment of real syphilis.

E. J. EDWARDES, M.D.

Dermatology.

RECENT PAPERS.

652. SCHULTZ, JOSEPH. — On the Microscopic Anatomy of Lupus Erythematosus. (*Archiv. für Dermat. ünd Syphilis.* 1 u 2, Heft., 1890.)

653. ZAGARI.—On Rhinoscleroma. (*Giorn. internaz. d. Sc. Med*, 1889, 4; *Archiv. f. Derm. u. Syph.*, 1890, p. 224.)

654. PRINGLE, DR.—On Congenital Adenoma Sebaceum. (*Brit. Journ. of Derm.*, 1890; *Monat. f. Prakt. Derm.*, vol. x., No. 5.)

655. GIOVANNI, DR.—On a Case of Hydroadenitis. (*Giornale Italiano d. malattie veneree e d. pelle*, 1889, *fascic.* 3; *Annales de Derm. et de Syph.*, No. 4, 1890.)

ART. 652. *Miscroscopic Anatomy of Lupus Erythematosus.*—The author, who had the opportunity of examining histologically an advanced case of lupus erythematosus which had never been treated, describes his results:—The patient was a lady, advanced in years, who had a patch of lupus erythematosus discoides on the back of the head, which had existed several years without any symptoms to cause discomfort. The patch was round, size of a shilling, bald, with raised, reddened border, set thickly with comediries, and a pale, depressed centre covered over with fatty scales. Since the time of Hebra, who, in 1845, described it as aseborrhœa congestiva, and, later, Cazenave, who placed it in the lupus group, the views as to its nature have become considerably changed. To-day, the consensus of opinion is in favour of it being a chronic inflammation of the skin, affecting the upper layers, but sometimes including in the morbid process all the tissues of the skin. The inflammation is characterised by an exudation, and round cell-infiltration following the blood-vessels, and resulting, first, in hypertrophy, then in fatty or hyaloid degeneration, and atrophy. The author believes the first morbid change to take place round the vessels in the papillary bodies, and that the sebaceous glands help its further development, in that their excessive secretion may act as one of the exciting causes of the round cell-infiltration, which seems likely, in consequence of the early appearance of the infiltration cells around the openings of the sebaceous ducts into the widened hair follicles, and harmonises further with the fact that it so often follows on from a local seborrhœa.

653. *Zagari on Rhinoscleroma.*—The author finds that this disease appears to be mostly limited to certain countries of Europe and America. Most of the reported cases have come from the eastern pro-

vinces of Austria, the south-western provinces of Russia, and from Central America. Only isolated cases have been reported from other European countries. [Cases have been reported from Hindostan.—*Rep.*]

654. *Pringle on Congenital Adenoma Sebaceum.*—Dr. Pringle has described and figured under this name a very rare but characteristic and very distinct affection of the skin, of which only a few cases have yet been observed. The affection consists in groups of small, shiny, smooth, reddish papules of the size of a pin's head to a little larger. They are vascular and distinctly grouped. Small, delicate, vascular distensions are observed on their surface. When pricked, a minute drop of blood flows, which is easily arrested. An excellent chromo-lithograph accompanies the paper, by which the identification of the affection would at any time be rendered easy. In Dr. Pringle's case, the eruption was most profuse on the sides of the nose, on the cheeks, down towards the angle of the lip and towards the chin. There is a model of the affection in the museum of the St. Louis Hospital. If the small tumours are removed, relapses are apt to occur. It would appear from the small number of cases yet observed that the female sex is more liable than the male.

655. *Giovanni on a Case of Hydroadenitis.*—Giovanni has observed in a woman, aged forty-five, who had just recovered from an acute illness (typhoid fever?), and after the administration of iodide of potassium, an eruption consisting of nodosities varying in size from a small pea to a grape seed, round or oval, slightly pointed, flat or depressed in the centre. They were situated in the skin, or extended to the subcutaneous cellular tissue. The nodosities were very numerous upon the legs and thighs, but not so much so on the upper limbs, the trunk and scalp, the face being free. In certain regions they presented a grouping analogous to that of papular syphilides. Two of these nodosities were ulcerated at their centre. Histological examination shows that one of the most recent nodosities of the thigh was formed by the union of nine sweat glands, compressed in an infiltration of leucocytes, which were more or less abundant at different points, and occupying the circumference of the glands and their excretory canals. This infiltration extended more deeply, forming irregular and badly limited foci. The glandular tubes were changed and destroyed in the lower part of the nodosity. The employment of iodide of potassium in these cutaneous legions had been negative.

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Laryngology and Otology.

RECENT PAPER.

656. Tcheltzoff, Dr. Mikhail M.—Styron in Chronic Purulent Inflammation of the Middle Ear. (*Bolnitchnaia Gazeta Botkina*, No. 18, 1890, p. 412.)

657. Denison, Dr. Charles.—On a New Mouth Gag, together with the Consideration of other Aids to Better Results from Intubation of the Larynx. (*Journal of the Amer. Med. Assoc.*, June 7, 1890.)

658. Thorner, Dr. Max.—On Chronic Throat Affections of Rheumatic Origin. (*Journal of the Amer. Med. Assoc.*, May 10th, 1890.)

659. Sajous, Dr. C. E.—On Hoarseness in Professional Singers, and its Treatment. (*Journal of the Amer. Med. Assoc.*, May 3rd, 1890.)

Art. 656. *Tcheltzoff on Styron in Chronic Otorrhœa.*—Dr. Mikhail M. Tcheltzoff, of Rybinsk, describes his experience with regard to styron in the treatment of chronic suppurative inflammation of the middle ear. Styron, or cinnamic, cinnamyl, styryl alcohol, is one of the constituents of balsam of Peru and liquid styrax, its chemical structure being represented by the formula: $C_6 H_5 . CH. CH. CH_2 HO = C_9 H_{10} O$. In a chemically pure state, it forms long, fine needles, which melt at 33° C and boil at 250°. They possess a pleasant smell, resembling that of the hyacinth flowers, are almost insoluble in water, but easily dissolved in spirits of wine or ether. In commerce there occur two preparations of styron, a crystalline one (just mentioned), and a liquid. The latter is a yellowish, oily fluid of a similarly agreeable aromatic, slightly hyacinth-like odour, and burning taste; it is insoluble in water, but easily soluble in spirit and ether. When placed on the tongue, the substance produces a fleeting local anæsthesia. Since the cheaper liquid styron acts identically with the expensive crystalline one, Dr. Tcheltzoff made his clinical experiments mostly with the former, using it after the formula: ℞ Styroni liquidi, ℈j; spiritus vini, ℥j. M.D.S.—To add a teaspoonful or a dessert-spoonful of the solution to a tumblerful of warm water, and to syringe out the ear two or three times daily. The use of styron was always preceded by syringing with water for a few days (in order to cleanse the parts and to watch the effects of a simple removal of purulent accumulations). The results were invariably very satisfactory. Styron proved to be an excellent disinfecting and deodorising means, most markedly diminishing the discharge, and also acting as an analgesic, while being almost free from any local irritant effects; in fact, it was well tolerated by all patients, except one, whose ear could not bear even irrigating with ordinary water. As some cases adduced by the author show, styron distinctly promotes recovery, even in patients with a very inveterate and severe otorrhœa. Of late, styron has become one of the favourite remedies of Professor A. F. Prüssak, the distinguished otiatrist of St. Petersburg having similarly found it beneficial in the cases under consideration.

Valerius Idelson, M.D.

657. *Denison on a New Mouth Gag, and other Aids to Intubation of the Larynx.*—Dr. Denison believes that the ratio of recoveries after intubation is susceptible of much improvement. He gives a table of his own cases (twenty-five in number), in which there were seven recoveries, or 28 per cent., which is about the average of other operators. Dr. Denison having found O'Dwyer's gag awkward, devised a new gag, which fulfils what he holds to be the three essential requirements, viz.:—(1) That it should be possible for an assistant to hold it in place, without any fear of its being disengaged during the operation; (2) that it should fit any aged child, and not injure the gums of toothless children; (3) that it should be strong enough and easily managed, though the patient resist. The prevention of pneumonia, "aspiration pneumonia," as Dr. O'Dwyer terms it, is a very important consideration. The records of deaths after intubation show that 60 to 70 per cent. result from lung complication. Although the septic state and extension downwards of the diphtheritic membranes are factors in the production of lung complications, Dr. Denison maintains that the most important factor is the rarefaction of the air in the lungs, which occurs during inspiration, when the larynx is obstructed.

This rarefaction, or aspiration, distends the walls of capillaries, and œdema, pulmonary engorgement, catarrhal bronchitis, and broncho-pneumonia result. Early intubation is the best safeguard against these dangers. Dr. Denison has been induced to intubate earlier in some of his more recent cases by noting that there was a very perceptible weakening of the tension of the pulse during inspiration, compared with the tension during expiration. He thinks this an undoubted sign that aspiration is commencing.

658. *Thorner on Chronic Throat Affections of Rheumatic Origin.*—Acute tonsillitis and pharyngitis have long been recognised as occasional local manifestations of rheumatism. Chronic rheumatic affections of the throat are, however, little known or described. Since Fletcher Ingals first called attention to chronic rheumatic laryngitis, in a paper read before the Laryngological Section of the International Medical Congress, in 1887, Dr. Thorner has paid more particular attention to this subject, and is able to distinguish a form of chronic pharyngitis and laryngitis that is evidently due to rheumatism, and which, as a rule, resists every treatment, except that which is directed to the diathesis. The seat of the rheumatic affections of the throat is in the numerous small muscles of this region and the fibrous tissues connecting the muscles with the bones and cartilage. The principal symptom of chronic rheumatic sore throat is pain localized in and about the pharyngeal and laryngeal regions. The pain is often limited to circumscribed areas. The spots which seem most predisposed to the rheumatic attacks are the posterior pillars of the fauces, the root of the tongue, the whole region over the thyroid bones, especially the region corresponding to the location of the greater cornua, and the lateral parts of the thyroid cartilage. The pains are intermittent, and worse during changeable weather. On pressure, we often find painful spots, particularly in the region between the thyroid bones and trachea. In addition to the pain, the patients often complain of a dry, burning sensation in the throat. Deglutition is generally difficult and painful. Usually the voice is not affected, though some patients experience fatigue when speaking. Locally, there is more or less congestion of the mucous membrane. The congestion is sometimes limited to circumscribed spots, and it may be wanting altogether. The diagnosis must, in addition to the local symptoms, rest chiefly on the patients' history. Most of them have suffered from the manifestations of rheumatism, or have inherited a rheumatic diathesis. The effect of treatment, however, is sometimes the best aid in making the diagnosis. Local applications have little or no efficacy. Dr. Thorner has used salol or salicylate of sodium in large doses, and has found their action satisfactory in the majority of cases. The use of the electric current and massage of the neck gave good results in some obstinate cases. Dr. Thorner appends to his paper the notes of three cases of chronic rheumatic sore throat which he considers typical.

659. *Sajous on Hoarseness in Professional Singers, and its Treatment.*—The fact that hoarseness is only a symptom explains the limited degree of attention devoted to it as a separate subject in medical literature. In this paper, Dr. Sajous endeavours to regard it as an entity, having a pathology and therapeutics of its own. Only the class of emergency cases which are met with in the daily routine of practice, and which present some difficulty in differential diagnosis, are considered, those due to such obvious causes as marked paralysis, advanced tuberculosis, syphilis, etc., not being attended to. The first cause considered is *perverted lubrication* of the larynx, and especially of the bands proper. Hoarseness dependent on deficient lubrication is most frequent in male singers, a circumstance pointing to tobacco as a possible element in the causation. It is not due to the toxic effect, but to the irritating action of air contaminated with smoke which the patient inhales. It may affect female singers also in this manner. The prolonged inhalation of dust, as occurs in railroad travelling, is another prolific cause, which often compromises a first evening's performance. The larynx presents some variations from the normal, the most noticeable being a slight redness, which, in professional singers, can be of little diagnostic value, since, in many, the larynx is normally hyperæmic. The redness may be especially marked at the vocal processes where a small piece of thick, white mucus is often seen. The subjective symptoms consist principally in a constant desire to "hem," and a sense of constriction in the throat. The singing voice, though not greatly altered, is more metallic or "rasping" than usual, greater effort being required when the upper register is attained. The voice, however, improves as the performance progresses, instead of getting worse, as it would were a true inflammatory process present. The therapeusis of this condition consists of a warm spray of a saturated solution of potassium chlorate every two hours, and ten grains of chloride of ammonium in a tumblerful of water, at the same intervals. The last dose should be taken at least three hours before the performance. Cases of *inflammatory* or *catarrhal* hoarseness are next considered. The most frequent cause of this form of hoarseness is the presence of catarrhal changes of a chronic character in the neighbouring parts, especially the nose, naso-pharynx, and tonsils. Lesions of the nasal cavities are not so apt to cause hoarseness as those of the naso-pharynx, or pharynx proper. The larynx is probably assailed in two ways; firstly, by exclusion of inflammation along the pharyngeal wall, and, secondly, by the irritating action of the secretions on the inter-arytenoid spaces. This latter region, as far forward as the vocal processes, is that which shows the greatest amount of congestion. Marked and persistent hoarseness sometimes characterize these cases. Redness, of varying intensity, may involve the whole of the larynx. In the treatment of catarrhal hoarseness, the first question to be considered is that of rest. As a rule, rest is indicated in every case, whether mild or severe. It is difficult to enforce it in professionals. A point of importance in the treatment which is often overlooked is attention to intestinal action. In female professionals, especially, constipation is the rule. Catarrhal disorders of the nose and pharynx require treatment appropriate to each, and attention to these disorders is mostly of paramount importance. *Impaired muscular motility* is an element in the production of hoarseness, especially in professionals, second only in importance to the inflammatory conditions just mentioned. Its origin is traceable to excess of work and to improper breathing during vocalisation. The thyro-arytenoid muscle is undoubtedly principally concerned in the production of hoarseness. There is not only interference with the mechanical action, especially in the more delicate functions, but also some alteration in configuration, from involvement of the areolar tissue around. Such changes, located in the arytenoid and thyro-arytenoid muscles, produce mechanical impediments to the juxtaposition of the

bands, similar to those caused by inflammatory changes. Hoarseness of myopathic origin is most frequently recognized in females. The larynx shows little or no alteration from the normal. The speaking voice is normal. The singing voice is generally alone affected, and that only in certain tones, though weakness pervades them all. For treatment, a mild Faradic current is useful. The laryngeal electrode is applied behind the larynx, below the inter-arytenoid notch, and the external electrode on each side of the thyroid cartilage. For an external electrode, Dr. Sajous prefers to use his thumb and index-finger, the end of the battery cord being fastened to the palm. In this manner he can make the application with much more exactness over the location of the muscles. The electrical application should be made three times a week, and quinine, nux vomica, and iodide of potassium are of use internally.

James B. Ball, M.D.

Diseases of Children.

RECENT PAPERS.

660. Rachford, Dr. B. K.—On Some Points in the Dietetic Management of Summer Complaint. (*Arch. of Pediatrics.* June, 1890.)

661. Christopher, Dr. W. S.—On Summer Complaint. (*Archives of Pediatrics.* May, 1890.)

662. Townsend, Dr. W. R.—On Acute Arthritis of Infants. (*American Journal of the Medical Sciences.*)

Art. 660. *Rachford on Some Points in the Dietetic Management of Summer Complaint.*—The chief, if not the only, direct causes of summer complaint, are abnormal intestinal fermentations, and these fermentations are chiefly of two kinds, acid and putrid; the former occurring in carbo-hydrates, the latter in albuminoids (the former being characterized by sour stools, the latter by putrid stools). This proposition simplifies the theoretical dietetic management of summer complaint. We endeavour, in each case, to determine if an acid or a putrid fermentation is present, and, having settled this point, we give a food which cannot undergo the same changes. This rule of practice, so charmingly simple in theory, is, however, to a certain extent disappointing in the every-day practice of medicine. One cause of failure is that food-stuffs in the intestinal canal are frequently supporting both forms of fermentation at the same time. In one part there may be acid, in another putrid fermentation. Another cause of failure is that the intestinal mucus may keep alive the abnormal albuminous fermentation, although the child be fed exclusively on carbo-hydrates. Notwithstanding these sources of error, it must be admitted that continued acid or putrid stools are, to say the least, valuable in indicating the proper food, just to the extent that they are valuable in diagnosis But we do not depend exclusively on the odour or reaction of the stools in selecting a diet, for we have other symptoms quite as important to indicate the character of the fermentation. Two great classes, which embrace all the serious forms of the disease, may be distinguished by characteristic symptoms. The first, and most important class is caused by the formation in the intestinal canal of ptomaines, from the fermentation of albuminous material. This class is characterised clinically by the presence of marked constitutional symptoms, such as fevers, stupor, nervousness, and convulsions, and frequently the stools contain mucus and blood. Constant nausea, not relieved by vomiting, is a common symptom. It follows that we should *avoid albuminous food when there are marked constitutional symptoms present.* And since the most dangerous forms of summer complaint are due to albuminous fermentations, it follows that we should *avoid albuminous food when in doubt as to the character of the fermentation causing the disease.* The second great class of cases of summer complaint is important rather in the number than in the severity of the cases. It is caused by the presence of local irritants, produced as a rule by fermentation of carbohydrates. The chief clinical characteristics are flatus, pain, urticaria, and absence of marked constitutional symptoms. Hence another simple rule of diet, viz., *avoid carbohydrates when there are no marked constitutional symptoms, and the disease is characterised by flatus, pain, or urticaria.* We have foods which are pure albumens, and foods which are pure carbohydrates, and the contraindications to these are contained in the above rules. Certain other foods, such as whisky, meat broth, and cream, contain so little carbohydrates, or albumen, that they are not contraindicated in either form, and we are safe in beginning the treatment of every case with these foods for twelve or twenty-four hours.

661. *Christopher on Summer Complaint.* — The true pathology of this disease, or group of diseases, is by no means settled. Dr. Christopher discusses the subject in an interesting paper, He points out that the pathology of the disease comprises three divisions: (*a*) its morbid anatomy; (*b*) its bacteriology; (*c*) its chemistry. It has become the custom todiscuss this disease, from one or other standpoint, according to the fancy of the writer, and with little or no reference to the other divisions of the subject. A case of summer complaint presents symptoms on the part of the bowels, on the part of the circulation, of the respiration, the kidneys, the skin, and the great nervous centres. The bowel symptoms are usually the most prominent. The odour of the stool is a most important feature; practically, it is always offensive, and in a great proportion of cases can be described as either sour or putrid. Every such stool is a fermenting mass, and the odour enables us to recognize two great classes of fermentations, one giving rise to *acid* smelling stools, the other to *putrid* stools. A putrid stool means fermentation of albuminous or colloidus material. Nitrogenous tissue is necessary for putrefaction. An acid stool, on the other hand, has its origin in the carbohydrates, and fats of the food. It is true that proteids contain a carbohydrate nucleus, and in decomposition may give rise to carbohydrates, or fatty acids, but the amounts so set free are merely nominal. The anatomical lesions in summer complaint are utterly inadequate to explain the symptoms, especially in acute cases. The best proof of the subordinate position held by lesions is the fact that the severest cases, those which terminate fatally within four days, have no lesions at all. They are to be regarded as the results of fermentation, and are more marked in proportion to the duration of the disease. They assist in prolonging the disease, and in all probability act by providing a habitat for the micro-organisms. The etiological importance of hot weather in the production of the diseases has been demonstrated beyond question.

Improper feeding and overcrowding must be classed as factors in the production of the complaint. The diet during the attack should be determined by the conditions within the bowels, as shown by the stools. In putrid fermentations, carbohydrates should constitute the food. If a case of recent putrid intestinal fermentation be limited to a non-albuminous diet, the putridity will cease in twenty-four to forty-eight hours. In a case which has acid stools from the beginning, the food should be albuminous, that is, white of egg. Here trouble is liable to arise from the starting of a putrid fermentation by the albumen. Ordinarily, however, the disease can be checked before any such trouble arises. Milk, containing, as it does, both proteids and carbohydrates, should be prohibited in all forms of intestinal fermentation. Nursing babies, with severe summer complaint, should be taken from the breast. All food administered, of whatever type, should be aseptic. In addition to regulating the diet on the foregoing principles, the treatment should include laxatives and intestinal antiseptics. Opium is contraindicated, except in persistent acid fermentation, which threatens to produce anatomical lesions.

JAMES B. BALL, M.D.

662. *Townsend on Acute Arthritis of Infants.*—According to Dr. Townsend, acute arthritis in young children occurs most frequently in the first year of life. It is pyæmic in character, an osteomyelitis of infant life, and is caused by one of the forms of staphylococci, most frequently the s. albus or s. aurosus. Occasionally it occurs as a sequel of the exanthemata, or may have a traumatic origin. The most frequent site of infection is the epiphysis near the joint. The disease progresses rapidly, and is very fatal, the mortality being about fifty per cent. The most frequent seats of the disease are the hips, knees, and shoulder. As soon as the disease is recognised, the pus should be promptly evacuated, the joints drained, and the parts dressed antiseptically. More or less destruction of the "joint end" of the bone, pathological dislocation, frail-like joints, and shortening of the limb are common sequels.

GEORGE BROWN.

Toxicology & Medical Jurisprudence.

RECENT PAPERS.

663. STARK, DR. HENRY.—On a Case of Multiple Arsenical Neuritis. (*Medical Record*, N.Y., June 21, 1890.)

664 UHTHOFF, DR.—A Case of Quinine Amaurosis. (*Deut. Med. Zeit.*, June 5, 1890.)

665. SCHWABE, DR.—A Case of Acute Poisoning by Antipyrin. (*Deut. Med. Zeitung.*, June 5, 1890.)

ART. 663. *Stark on a Case of Multiple Arsenical Neuritis.*—In placing on record this case of multiple arsenical neuritis, Dr. Stark remarks on the comparative infrequency of this variety of polyneuritis, and the scarcity in medical literature of authenticated cases of this kind. Miss H——, aged 18, in a fit of despondency, swallowed a large quantity of Paris green with suicidal intent; vomiting followed very soon, and a physician being summoned, antidotes and emollients were prescribed. Agonizing pain in the gastric region, and over the entire abdomen, soon set in. On the next morning she had a slight chill, followed by a sense of heat, and accompanied with considerable prostration. The vomiting ceased, but the burning pains in the abdomen continued. In about ten days she became aware that her vision was growing indistinct, and her hearing was affected; the whites of her eyes were not reddened, but the lids were somewhat swollen. About this time an eruption of red pimples appeared about the forehead, lips, and right intercostal region. Recovery from the immediate effects of the poison was now assured, but for a long time a considerable degree of gastro-intestinal irritability persisted. In a few days the normal vision and hearing returned, but about this time, some twelve days after taking the poison, she complained of darting pains in the legs, feet, forearms, and hands. The pains were intermittent, and more intense at night. Feelings of numbness, coldness, and formication were present, the latter especially felt in the fingers and toes. At this time the hands and feet were constantly bathed in cold perspiration, and began to swell. There was great sensitiveness to pressure. At the end of the third week, on getting out of bed, she found she could not stand, and there was impairment of motion of the hands. When, at this stage, she came under observation, the following was her state:—There was almost complete wrist-drop and foot-drop; voluntary extension of the toes and phalanges was very imperfect; atrophy of muscles was marked in the radial, posterior brachial, anterior tibio-fibular, and peroneal regions. The interossei of the feet and hands were somewhat wasted. There were slight tremors of the calf muscles, and fibrillary twitchings of parts of the atrophied muscles; the superficial reflexes, abdominal and plantar, responded sluggishly, the patilla-tendon reflex and ankle clonus were absent. The patient still complained of burning pains along the logs and forearms, and tingling sensations in the palms and soles. There was partial anæsthesia in the dorsum of the feet and backs of the hands, otherwise the sensory disturbance was rather of the nature of hyperæsthesia. There was tenderness along the affected muscles, especially at the points of exits of the nerves. Electric contractility to faradism was lost in the muscles supplied by the musculo-spiral and anterior tibial nerves. These nerves and their branches, however, respond to a galvanic current of moderate strength. The bladder and rectum were never affected. The urine was normal. She was treated with the galvanic current and massage, and iodide of potassium and strychnine. In six weeks the symptoms had disappeared.

JAMES B. BALL, M.D.

664. *Uhthoff on a Case of Quinine Amaurosis.*—In October last the patient had a slight attack of fever, and took quinine, probably to the amount of several grammes, within a short interval. She lost consciousness, had convulsions, and on the following day noticed that she could hardly see. This disturbance of vision has since remained in the same condition. There is marked concentric limitation of vision. On ophthalmoscopic examination are seen great narrowing of the arteries, and even complete obliteration of some vessels. The pupils react with difficulty to control illumination.

665. *Schwabe on a Case of Acute Poisoning by Antipyrin.*—A young lady, 22, well nourished, but hysterical, was ordered antipyrin in one gramme doses (15 grs.) for neuralgia. Three minutes after taking the first dose she complained of peculiar pressure-like

pains in the occiput, and, after a few minutes, of noises in the ears, tinnitus aurium, faintness, and anxiety; alarming palpitation of the heart, dyspnœa, cold sweat, feeling of heat in the whole right half of the body, coldness and numbness of the left half. After about twenty minutes every thing appeared black, and in a few minutes more complete amaurosis supervened, which remained for quite half-an-hour, and then gradually disappeared. Examination of the eyes showed great hyperæmia of the optic nerve, with slight obliteration of the contour of the papilla. The conjunctiva was also very hyperæmic; lachrymative, some exophthalmos. Face very congested, lips cyanotic. The right half of the body felt warm to the touch; and the left, the hand of which was cyanotic, icy cold. The palpitation was great; the pulse 200 in the minute, thread-like; respiration, laborious; speech, difficult. After about half-an-hour, with sense of burning and irritation, an exanthematous urticaria appeared, especially in the right hand and extensor side of the right arm and front of neck. The left half of the body was quite free from the rash. Vomiting. The exanthem disappeared in the course of the same afternoon, and the other symptoms gradually abated. The rapid pulse, however, fell slowly, and on the following day was still 90. The patient was very weak for several days. She had taken antipyrin before with advantage, but in what dose is doubtful. Caffein was given in doses of 0·1 grammes every three hours with good effect.

G. D'Arcy Adams, M.D.

Neurology.

RECENT PAPER.

665. Thomson, Dr. W. Gilman.—Three cases of Tumour of the Frontal Lobe. (*Philadelphia Medical News*, May 31, 1890.)

Art. 665. *Thomson on Tumour of the Frontal Lobe.*—The possibility of removal by surgical interference makes all cases of brain tumour of special interest. Localisation has reached a pitch of accuracy which, although far from absolute with many functions, is full of encouragement for further study. The prefrontal is still a large undetermined region. In animals irritation of the posterior part of the frontal lobe has been shown to produce movements of the muscles of the head and neck, and sometimes rotation of the eyes. Removal of the anterior portion of the frontal lobes in dogs seems to occasion loss of memory and changes in temper; the animals become restless and irritable, but no abnormalities of motion or sensation are produced. In man very severe injuries of the frontal lobe have been reported, with considerable destruction of tissue, sometimes without any mental, motor, or sensory symptoms whatever. On the other hand, congenital or acquired defects of the prefrontal region have often been observed in connection with enfeebled intelligence or idiocy. Many of the lower races of man present a relative deficiency in the developement of this region, as well as of the tempore-sphenoidal lobe. Conversely it is customary to associate a high degree of frontal developement with great intelligence. Three cases are reported by the writer. Of these one was a secondary sarcoma, and the remaining two gummatous. All three showed more or less mental disturbance, either irritability or dulness, or both alternately. The gummy cases were alike in irritation and convulsions. Two suffered from headaches. The first case is that of a German, a steady workman, who was struck six years previously on the head, and had suffered ever since with epileptiform convulsions. There were mental symptoms, and the patient died after several attacks of hemiplegia and severe convulsions. About a dozen pea-sized gummy tumours were found in the anterior and central parts of the frontal lobe. The fact that the convulsions were at first general, and absence of external marks, negatived the idea of traumatic epilepsy. The second case was that of a negress of thirty, who suffered for six years from general epileptiform convulsions, commencing in the right side. She died after a succession of fits. The superior and middle frontal convolutions contained ten or a dozen gummy tumours, varying from a pea to a hazelnut. Features common to both cases were :—(1) General irradiation of irritation from a local lesion. (2) Local lesion far in front of the common motor areas. (3) Entire absence of history or definite symptoms of syphilis. (4) Complete recovery between the attacks. The third case was that of a Swedish woman of 47, who had been operated on one year previously for a sarcoma of the neck. Mental symptoms were marked. There were no unilateral nerve symptoms. The woman died of coma. In the anterior portion of the right frontal lobe was a sarcomatous mass, 4 by 3·5 centimetres in its diameters. The interesting features are: first, the absence of unilateral or distinctly localized symptoms, with the presence of a cerebral tumour as large as a small egg; secondly, the varying mental condition of the patient. Localisation would have enabled the removal of the growth, which could not have been done in the two syphilitic cases. This paper seems to add little to our knowledge of the functions of the frontal lobe, but they confirm previous observations in regard to alterations in temper and disposition, mental irritability associated with alternating stupor, which accompany lesions of this obscure region. The convulsions may have been due to indirect pressure upon the motor areas posterior to the tumours, which was periodically augmented, perhaps by temporary alterations in the local blood-supply, perhaps by the commencement of a new focus of growth, to which the cortical cells would later become accustomed.

David Walsh.

Epidemiology.

RECENT PAPER.

666. Aparicio, Dr. A. — On the Spread of Leprosy in Colombia. (*Revis. Med. de Bogotà*, April, 1890.)

Art. 666. *Aparicio on Leprosy.*—Leprosy (elephantiasis Graecorum) is reported to be spreading with alarming rapidity through Colombia, both by inheritance and contagion. This has been proved in numerous discussions in the Society of Medicine and the Natural Sciences of Bogotà, to which all its members, including the professors of medicine in the country, have made contributions. Leprosy, writes Dr. Abraham Aparicio, has spread in a most rapid and alarming manner through all the extent of Columbia. In Antioquia the disease was so completely unknown that, according to Dr. M. Urebe Angel, it was regarded as the legacy of a single nobleman. In a time which is not very distant it appeared as a disease affecting individuals here and there, then it was known as the disease of families, then as affecting groups of people, and not much later it might be called a disease of the whole inhabitants of the country. In Santander and in Boyaca the tenth part of the population is infected with elephantiasis, and in the other departments the disease is spreading in a most alarming manner. Dr. Aparicio, therefore, calls upon the National Council to take up the consideration of the project of law presented in 1886. He calls upon the legislation to provide for the separation of every person who suffers from leprosy, as a hygienic measure of urgent public necessity. He also recommends the construction and regulation of lazarettos. The following notes upon the propagation of leprosy were sent by Dr. Navarro, of Velez, to the *Revista Medica*:—C. R., a leper, had two sons by a healthy woman. The first became leprous when two years of age, the other a month after birth. L. S. took two women into her service, and in less than a year both became leprous like their mistress. L. P., quite healthy, married with Senora M. P., and at the end of three months he became leprous, and is now in the lazaretto. Dr. Navarro has observed that the sons of persons afflicted with gout often become leprous, though none of their ancestors have suffered from elephantiasis. He could present eight cases of this kind; hence he thinks that gout has a predisposing influence, rendering the patient more liable to the morbific causes of leprosy. C. C., a leper woman, entered into the service of a man who was in good health, with no morbid antecedents; he became affected with leprosy from her, which took such a rapid course that the man died before her. It would appear from this that there is something in the present condition of Colombia peculiarly favourable to the spread of leprosy. I have observed this disease in India, where it is sporadic, and in Madeira where it was principally propagated by heredity, and very rarely, if ever, by contagion. In this island there was no activity in the spread of the disease. It is also declining in Scandinavia, where it still exists in a severe form, after disappearing from the rest of Northern Europe. W. W. IRELAND, M.D.

Reviews.

ARTICLE 667.

Transactions of the Eleventh Annual Meeting of the American Laryngological Association. New York: D. Appleton & Co. 1890.

THIS volume contains the papers read at the annual meeting of the American Laryngological Association, held at Washington last summer, together with a report of the discussions which took place. There are twenty-one papers in all, and although some are of undoubted interest, there is nothing strikingly original about any. Dr. Carrol Morgan reports a case of supernumerary tonsil, a somewhat rare condition. Cases of œdema of the upper air-passages, associated with septic sore throat, are described by Drs. Langmaid and Glasgow. The prevailing opinion, of those who took part in the discussion, was that these cases were really of a diphtheritic nature, the membranous deposits being of limited extent, and having perhaps disappeared at the time the case came under observation. The pharyngeal tonsil receives attention at the hands of Drs. J. N. Mackenzie and Bryson Delavan. Dr. Delavan calls especial attention to the troubles resulting from repeated acute inflammatory attacks in this tonsil, a condition not sufficiently recognized. Tuberculosis of the larynx is dealt with by Dr. Rice, and two cases of buccal tuberculosis are reported by Dr. C. E. Bean. Dr. C. H. Knight has a paper on the treatment of hypertrophied tonsils with the galvano-cautery. He quotes the opinions of numerous authors on the relative advantages of the guillotine and the galvano-cautery loop for excision of the tonsils. He reiterates his own previously expressed opinion on the subject as follows: "Galvano-cautery should be reserved for a comparatively small proportion of cases, including those in which the hæmorrhagic diathesis is present or suspected, those in which vascular anomalies may be recognized, those in which anatomical conditions prevent a sufficiently complete excision of the organ, and those in which the use of the knife is positively declined." Dr. Knight quotes a statement of Delavan to the effect that although he has seen and performed hundreds of amygdalotomies, without having known diphtheria to follow in a single instance, he has known four cases in which the disease has immediately followed the use of the galvano-cautery. Diphtheria after excision with the guillotine is, however, not unfrequent. We have ourselves met with two such cases, both ending fatally.

ARTICLE 668.

Lectures on Children's Diseases. By DR. HENOCH. Vol. ii. Translated from the fourth edition (1889) by JOHN THOMSON, M.B. London: The New Sydenham Society. 1889.

THE present volume contains sections on diseases of the digestive organs, diseases of the urinary organs, infectious diseases, and diseases of the skin. The reader will find, throughout these lectures, abundance of valuable information of a kind not to be found in systematic works on the diseases of childhood. The descriptions of diseases are largely drawn from the author's own personal experience, and numerous illustrative cases are given. The book is thoroughly practical; treatment receives a large share of attention, and in all respects the work is one which the general practitioner will find useful.

The chapter on nephritis is perhaps one of the best in the volume. The author lays stress on the occasional occurrence of undoubted cases of scarlatinal nephritis, in which, in spite of repeated examination of the urine, neither albumen nor microscopical indications of nephritis can be found. In the treatment of nephritis, the subcutaneous injection of hydrochlorate of pilocarpin is not commended, and sweat-baths are considered preferable.

In the section on infectious diseases, rötheln does not find a place. The following passages referring to it will be found in the chapter on measles:—"The existence of rötheln is still a matter of lively controversy . . . . My own experience does not enable me to give a decisive judgment in this matter. Although I have occasionally seen two or three children, in one family, taken ill with an affection corresponding to the rötheln described by other writers, and have frequently seen cases in which I felt doubtful about the diagnosis, still, I have never yet had an opportunity of observing this condition occurring to any great extent, either epidemically or endemically, as several have described it." We may add that, in our opinion, any one who has had the opportunity of observing an epidemic of rötheln, will have no doubt whatever about the existence of the complaint as an independent malady.

Dietetic Preparations.

THE COMPARATIVE NUTRITIVE VALUE OF MEAT EXTRACTS.

It is evident from the many brands of extracts of meat now before us, that the consumption of them must be very great. Whether the supply is created by the demand or *vice versâ* it is not worth occupying time to inquire; our province on the present occasion is to examine them in relation to their dietetic value, and to see if the invalid, or those for whom they are prescribed as nutrients, obtain that nutrition from their consumption which it is supposed they do. In this category we may also include home-made beef-teas. Many medical men advocate the home-made infusion, or decoction (whichever form is preferred), while in recent years various members of the profession who have made a close study of the subject have condemned beef-teas *en masse*, so far as their nutritive value is concerned.

At the meeting of the British Medical Association at Glasgow, in August, 1888, Mr. Thomas Laffan, M.K., Q.C.P.I., read a paper on "Our Exaggerated Estimate of the Value of Beef Tea," in which, besides his own researches, he quotes the opinions of Liebig, Hassall, Sée, &c. He cogently remarks that we may fairly take "Liebig" for our authority, seeing that "his every interest was in favour of exaggerating its merits." He (Liebig) states "*that the greatest care is taken to exclude from his extract all fibrine, gelatine, albumen, and fat.*" He further adds that the component parts *do not give strength where there is none*, and that it merely acts on our nerves, so that we become conscious of our existing strength. The same authority confesses that to extractives and salts is due all the value the extract possesses, that it is to be classed with tea and coffee, and that it neither economises carbon for our temperature nor nitrogen for the sustenance of our tissues." Mr. Laffan adds, "As to the difference between ordinary beef-tea and Liebig's extract of meat, he merely claims for the latter, that it contains less water than the former." M. Sée says, *beef-tea contains very little albumen and very little carbohydrates;* that the glycogenic matter, the inosite, the sugar, and the lactic acid that belong to fresh meat are altogether altered in beef-tea. Dr. Hassall, too, long since showed that 14½lbs. of beef would be required to yield *beef-tea enough to supply the nitrogenous daily waste* of one individual, calculating that such waste amounts to 512 grains of urea and 21 of uric acid daily. A remarkable fact has been brought to light by Dr. Michael Foster, *that dogs when fed exclusively on Liebig's extract die sooner than when left unfed.* If, then, we are to look upon the "Liebig" extract, as it claims to be, viz., one of the best, we see what amount of value attaches to it as a nutrient. Mr. Laffan sums up his arguments by suggesting that we should see what aids we can summon for the sustenance of the patient who is temporarily incapacitated from using the ordinary solid meat.

The following year, at the same Society's meeting at Leeds, Mr. Charles Moore Jessop, M.R.C.P. London, M.R.C.S. England, discussed the same subject in a paper, "Meat Food for Invalids, and Waste in Methods of Preparation," and arrived at very similiar conclusions. He said that nurses, patients, &c., clamour for clear beef-tea, *and that clear beef-tea is of no use to any one as food*, and that the grounds, at the bottom of the cup, which hold the nutrient features are pronounced as of "no good" and are thrown away.

Speaking of meat-extracts generally, Mr. J. Scott Battams, M.R.C.S., &c., many years Resident Medical Officer, East London Children's Hospital and Royal Free Hospital, writing recently, said, "At present we are bewildered and disgusted at the number of meat-preparations in the market. Their high price and variable dietetic and medicinal value, as well as the preposterous claims often put forward on their behalf, have weakened one's belief in any of them."

Without quoting further professional opinions, we are of opinion that some preparation of a natural product, that will appeal to common sense, as well as practical knowledge, is required for patients who cannot assimilate solid animal food, if we are desirous of recuperating the impaired condition of invalids and those suffering from wasting diseases. A new preparation of beef has recently been introduced into England which, we believe, will help to fill the void that undoubtedly exists in this direction, viz., Dr. Caffyn's "Liquor Carnis," which is meat-juice obtained by a cold process. Anxious to make ourselves acquainted with the mode of manufacture of this preparation, we asked permission of the Managing Director of the Company, Mr. Shepperson, at the Offices on Holborn Viaduct, to be allowed to visit their Factory at Deptford for the purpose named, and this permission was cheerfully accorded. We were led to believe that the process was a simple one, and we found it even more so than we expected. Entering the principal room, we saw a large cutting-up table, on which the meat is deposited. The meat used consists of the choicest parts of the hind-quarters of the best bred and fed English or Scotch beef, no foreign animal being allowed to contribute its quota to the bulk. The meat is then placed on metallic trays, and deposited in a hydraulic press standing in the same room. Each section of the press has a channel around its four sides, with holes in the central portion through which the juice exudes, and is thence conveyed to the receiver at the lower part. Under a pressure of about 400 tons the pure meat-juice is soon seen making its way through the sections as described. The liquid is then poured into glass carboys securely sealed, which are placed on shelves around the room. It is then mixed with a definite proportion of a carbohydrate, which not only supplies the amount of carbon necessary to a liquid so rich in nitrogen, or the bread to the meat as it were, but also acts as a permanent preservative. It is very soon ready for bottling, and this is effected by means of a glass syphon. The full bottles placed in wooden trays each holding the same number, are taken to an adjoining room, where they are corked by machinery, capsuled, labelled and put up in cardboard boxes, ready to be sent out. The greatest cleanliness is observed throughout, and the hydraulic press and any vessels used in the process are cleansed and sterilised by steam every day. As a further security for ensuring absolute purity in the products during hot weather, a new press, fitted with ice-pockets at the sides, is in course of manufacture.

As regards the nutritive value of "Liquor Carnis," it will be seen by our description that it is simply the pure juice of the finest beef, extracted cold and without alteration of its constituents, for the liquor contains albumen, fat, phoshates, lime, magnesia, and alkalies (soda and potash), thus giving flesh-forming and heat-producing elements, present in a form calculated to give a highly nourishing food in an easily assimilable condition, while the addition of the glycerine increases its nutritive value. We have seen a number of testimonials, strongly recommending "Liquor Carnis," from well-known medical men, who have prescribed it in private and hospital practice, and it is reputed to have been used with excellent effects in consumption and other wasting diseases, and in preference to cod-liver oil and iron. Professor Wanklyn says "Liquor Carnis has a specific gravity of 1·1195, water at the same temperature being 1·0000, it contains *unaltered animal albumenoids*, and its value as food is very high. I am quite prepared to endorse the statement that Caffyn's "Liquor Carnis" offers advantages which *no other kind of invalid food has been found to possess*. I can recommend it to the attention of the Medical Profession. It is most useful."

Before leaving the works, we were asked to taste the "Liquor Carnis," and to give our opinion as to the most suitable liquid in which to take it. It is not every preparation of a liquid nature that will assimilate well with numerous others, but "Liquor Carnis" is most accommodating. We tasted it by itself, in water, milk, mineral waters, &c., and, lastly, mixed with Rose's Lime Juice—a combination to which we certainly award the palm. We believe children will prefer this to any of the other admixtures mentioned, while there can be no doubt it makes an excellent summer thirst-quencher in this form, providing, as it does, a nutrient of undoubted value, and easily assimilable, while the mild acid of the lime-juice adds to its medicinal value.

New Articles.

We are always glad to welcome an addition to preparations which really promise to be of service in affording the sick a reliable article of diet. It is well known that many of the so-called juices and extracts of meat in the market only contain a minimum of the principles of the meat from which they are taken, and those which have attained a reputation are so high-priced as to be hardly accessible, except to the rich. We have recently had occasion to examine a sample of "Bovinine," manufactured for years past by the J. P. Bush Manufacturing Co., of Chicago (London: 32, Snow Hill, E.C.). It is a dark-coloured fluid, with little sediment and with 8·2 per cent. of coagulable albumen. While well known in the States, it has not come largely into use in this country, probably because its claims have not been brought to the notice of the profession. As a raw food-extract (the first of its kind), it certainly seems to possess many valuable qualities, its palatableness being one of them. It can readily be prepared for use, either by the mouth or the rectum, the only precaution required being not to employ liquids at a temperature likely to coagulate the soluble albumenoids. Provided the present high quality be maintained, "Bovinine" will certainly win for itself a large amount of patronage.

At a recent graduation examination at Halifax (America) there was one candidate—evidently a man of ability, for he came out first on the list.

Patents.

[*This list is specially compiled for the* London Medical Recorder by Messrs. Rayner & Cassell, *Patent Agents, of* 37, *Chancery Lane, London, E.C.*]

8,907. Improvements in the manufacture of medicated tabellæ, tabloids, and pellets. Fredk. Janson Hanbury, 6, Bream's Buildings, London.

8,973. Invalids' garments. Emma L. Tozer, 35, Southampton Buildings, London.

9,205. "Anticraig," the cure of gravel and excellent remedy for obstruction and involuntary discharge of urine. Marella Brabyn, 2, Cardigan Terrace, Heaton, Newcastle-on-Tyne.

9,332. A thermo dry inhaler for inhaling volatile substauces in a current of warm dry air. John Hinton Lake, 41, High Street, Exeter.

9,490. Improved warmers or pads to be applied to the feet or other parts of the body. Ed. Roberts and Absalom Jones, 4, St. Ann's Square, Manchester.

9,547. An improved inhaler. Arthur William Shirley, 4, South Street, Finsbury, London.

9,549. An improved photographic shutter. Harry Ranson, 4, South Street, Finsbury, London.

9,622. An improved bronchitis kettle. Emma Janet Pike, 38, Trebovoir Road, South Kensington, London.

9,692. An improved appliance for anatomical purposes for men, women, and children. Robert Dixon Hewetson, 4, Huggin Lane, Wood Street, London.

10,078. A combined baby-walker and baby-jumper. Alfd. Burkholdee, 27, Southampton Buildings, London.

10,271. An implement relating to medico-electric batteries. Noah Mitchell, 166, Fleet Street, London.

10,422. Implements in menstrual pads or bandages for the use of women. Eliza Murden, Poets' Corner, Westminster.

Specifications Published.

12,785. Hussonmorel. Invalids beds. 1889. 6d.

7,045. Thrower. Handling invalids. 1890. 6d.

7,391. Thompson (Schuttle). Injectors. 1890. 8d.

10,590. Gisborne. Invalid chair. 1889. 6d.

14,336. Brown. Surgical boot. 1889. 6d.

The above specifications may be had of Messrs. Rayner & Cassell, Patent Agents, 37, Chancery Lane, London, W.C., at the prices quoted.

[Should any of our readers desire to take out patents for inventions, either English or Foreign, and require advice upon the subject, the "Patent" Editor will be pleased to give them the benefit of his knowledge and experience. Communications addressed to the "Patent" Editor, *Medical Recorder*, 13, Waterloo Place, Regent St., S.W., will receive prompt attention.]

At the recent anniversary meeting of the Linnæan Society, the Linnæan medal was awarded to Professor Huxley.

Miscellany.

STRYCHNINE lollypops are said to be coming into fashion in the States as a fashionable pick-me-up. Seeing that the drug is an aphrodisiac and increases the peristaltic movement of the intestines, these sweetmeats, which might be called "Dulcamara," are certainly an undesirable addition to the diet.

A YOUNG carter, of Liverpool, who had "been drinking hard," complained of stomach-ache to his master's wife. She gave him two and a-half ounces of sulphate of magnesia at a dose, and the next day some jalap! Fortunately for the lady dispenser, the jury ascribed the death to the drink!

THE American Association for the Advancement of Science has just distributed a circular to the practitioners and druggists of the United States and Canada, calling attention to the question of introducing the metrical system of weights and measures into the edition of the American pharmacopœia.

IT is proposed to establish a new cemetery and crematorium at Mitcham (Surrey), on a plot of land fifty-two acres in extent, a company, to be called the "New London Cemetery and Crematorium, Limited," having been floated for the purpose. Those of our readers who wish to "batten corpses" should hasten to take shares.

THE Royal Humane Society have awarded their bronze medal to Hubert A. Bray, physician and surgeon at Cape Juby, on the West Coast of Africa, for the following act of bravery:—The ship *Sahara* was nearing the port of Arrecife, Lanzarote, one of the Canary Isles, when Dr. T. Russell Cruise fell overboard. Mr. Bray jumped overboard after him, and succeeded in supporting him until picked up by a boat.

DR. MORE MADDEN, of Dublin, has received, on the nomination of Professor J. D. F. Paine, the honorary degree of M.D. from the Texas Medical College, "as in some part, a recognition of his services as a practitioner, and his valuable and distinguished labours in the field of gynæcology." Dr. Madden has also recently been elected a Fellow of the Italian Society "Dei Benemeriti" of Palermo, and has been awarded a gold medal therewith.

THE Royal College of Surgeons of Edinburgh having, by the generosity of His Excellency, Dr. Robert Halliday Gunning, been enabled to institute a Triennial Prize of £100, called "The Liston Victoria Jubilee Prize," open to all Fellows and Licentiates of the College, for the greatest benefit done to practical Surgery, by any of these during the triennial period appointed a special committee for the adjudication of the prize for the triennial period to 20th June, 1890; and the same was awarded to Robert Lawson Tait, 7, The Crescent, Birmingham, a Licentiate and Fellow of the College.

"WOHNUNGSANGELEGENHEIT."—This is the word which must be written on the outside of the envelope, together with the address, 19, Karlstrasse, Berlin, N.W., by those who want to secure lodgings for the Congress. As a reminder of what Englishmen, who do not happen to know much German, may expect from the German language, this word is a capital beginning. The word, certainly, looks noble, whatever it may happen to mean.

THE INTERNATIONAL MEDICAL CONGRESS AT BERLIN.—The tenth International Medical Congress, to be held at Berlin next month, promises to be a most successful affair. Upon every side one hears of the intention of men from this country to be present. The opportunity, moreover, will be an excellent one for those to whom the Continental schools are yet unknown, to acquire some insight into these seats of medical learning. For these and many other reasons, the Congress is well worthy of being attended, and intending visitors should lose no time in making their arrangements.

THE MIDWIVES' REGISTRATION BILL.—The useful suggestion that the ignorant practice of midwifery by untrained women should be prevented by law, has taken the shape of the introduction of a Bill called the "Midwives' Registration Bill," by which all midwives shall be compelled to be registered as a guarantee of their fitness for the work they undertake. The Bill has, probably, with certain minor amendments, every chance of passing into law. It has been, for some months now, before the profession and public, and much interest will, doubtless, be taken in its progress through the Houses of Parliament. That it is calculated, if it becomes law, to promote the welfare of a large class of poor women unable to afford medical fees in their confinements, is quite certain.

A MEDICAL WOMAN.—We learn from the *Boston Medical and Surgical Journal* that Madame Ribaut, "ex-grisette," was the first European to practice medicine in the Turkish harems. Her lover, in Paris, was a medical student; she devoured his text-books with more avidity than he did her novels. She passed a brilliant examination at twenty-six, and went to Cairo to practice; her patients were soon numbered by hundreds, but the excesses into which she plunged resulted in her incarceration in an asylum. She then commenced a new career in Cochin China, and at once won the admiration of the French inhabitants. So speedily did her skill as a surgeon make her famous that she, in a short time, became physician to the Court. It is refreshing to read of a successful career in medicine, even when the fortunate person is a woman.

NATIONAL MEDICAL CONGRESS OF JAPAN.—*The Sei-i-Kwai Medical Journal* for April last contains an interesting account of the National Medical Congress of Japan which was held in Tokyo in the first week in April of this year. We gather that the attendance was large, numbering several hundreds, of whom a proportion were lay persons, attracted by the novelty of the meeting. Addresses were delivered by leaders of the profession in Japan, one of them by Dr. Nasayo, Director of the Sanitary Bureau, on the early history of Western Medicine in Japan, with an exhibition of some of the first translated works. This strikes us as being probably of considerable interest, and of great value to those whom the Japanese nation are always a source of attraction. The programme for the next five days consisted in the reading of papers by distinguised Japanese physicians in the mornings, the afternoons being devoted to visitors, at the various Hospitals and other places of professional or general interest. The Congress was plainly a great success, despite the fact that it was the first of the kind which has been held in the country.

MESSRS. BURROUGHS, WELLCOME & CO. had the honour of furnishing Mr. Stanley with his outfit of medicinal agents, and judging by the following excerpt from the latter's work on "Darkest Africa," their generous gift seems to have been fully appreciated. Mr. Stanley says, "Messrs. Burroughs, Wellcome & Co., of Snow Hill Buildings, the well-known chemists, furnished gratis nine beautiful chests replete with every medicament necessary to combat the epidemic diseases peculiar to Africa. Every drug was in 'Tabloids,' mixed with quick solvents, every compartment being well stocked with essentials for the Doctor and Surgeon. Nothing was omitted, and we all owe a deep debt of gratitude to these gentlemen, not only for the intrinsic value of these chests and excellent medicines, but also for the personal selection of the best that London could furnish, and the supervision of the packing, by which means we were enabled to transport them to Zambuya without damage." This enterprising firm must feel satisfied with such an unequivocal testimonial to the convenience and reliability of their medical wares; for no mere sense of gratitude would prompt a man to rely on anything which had failed to prove its value in hours of need—and they were many—during this perilous trans-African expedition.

How Respect for Science is Enforced in Russia.—*Le Journal de Médecine de Paris* (22 Juin 1890) is responsible for the following:—"A correspondent at St. Petersburg writes, 'An extraordinary affair at Odessa has come to my knowledge. There is in the city in question an Institute of Bacteriology, founded and maintained by the municipality. The director is a Dr. Bardach, a pupil of Pasteur, who superintends the vaccination of cattle against anthrax and Siberian plague, after the method of Pasteur. The Russian Imperial Government sent circulars to all the landed proprietors of the south of Russia requiring them to have their cattle vaccinated, and the brothers Pankvatjeff, two millionaires, accordingly sent for Dr. Bardach the other day to come to their estates in order to vaccinate their cattle. Unfortunately the doctor made some mistake in the vaccine virus, and in two days there died 3,552 sheep, 1,200 horned cattle, and some hundreds of horses. Their owners brought an action against the Bacteriological Institute, that is to say against the city of Odessa, and demanded damages. The case was tried a few days ago. The counsel for the city stigmatized the brothers Pankvatjeff as persons knowing nothing of scientific matters, and stated that he was at a loss how to characterize "persons who dared attack the great and celebrated *savant* Pasteur." In short he pleaded so effectually that not only did the brothers Pankvatjeff fail to obtain a verdict, but the tribunal condemned them to pay, in common, a fine of 3,500 francs, as well as the costs of the trial, *pour leur apprendre à mieux estimer la science*."

In the *Medical Journal*, published under the auspices of the Society for Medical Advancement in Japan, for March, 1890, there is a preliminary notice of the Japanese National Medical Congress, which is referred to as one of the greatest events in the history of the country. Commenting on the importance of the work to be achieved by the congress, the *Journal's* editor observes that much of what forms the foundation of medical practice in the West is for Japan still unknown; and he goes on to state that "a trustworthy presentation of what is included under 'vital statistics' is as yet impossible; we have but recently learned the age of puberty in this country; that at which the menopause may be expected, is still only to be inferred; the geographical situation and geological formation of the country, the frequent occurrence of earthquakes, the nature of the food, habits, and temperament of the people, offer some suggestions as to the national predisposition to disease, but we have very little definite knowledge of it." The article concludes by insisting that "the National Medical Congress of Japan has work to do which will call all of its labourers into the field." Nor can the work accomplished under such a stimulus to earnest effort, as is shown by the tenour of this notice in our Japanese contemporary, fail to be productive of much lasting good in the direction of advancement of knowledge. The same number of the *Journal* contains, in its English part, an interesting account of a case of cancer of the liver, presenting no symptoms of special hepatic disease during life, save by enlargement of the liver; no jaundice having been noticed till just near the fatal termination. This case is reported by Mr. Y. Saneyoshi, F.R.C.S. Eng.; and notes of microscopical appearances of thirteen cases of idopathic gangrene are contributed by Dr. E. Haga, who concludes that the real source of the condition is arteritis obliterans.

The Nursing Profession.—Nurses have little reason to complain of the public attention which is being focussed upon their calling. Indeed, at no time has so much interest and—shall we say?—excitement been centered around what we suppose must now be styled the nursing profession. The associations, too, which have been framed for the benefit of nurses, are now several in number. We have, for example, the British Nursing Association—a most useful and excellent institution—which is worthy of the support not only of those for whom it was founded, but of the medical profession as well. Then there is the scheme—almost an accomplished fact—of establishing a Home of Rest for nurses, in which Royalty has greatly been interested. Then we have the spectacle of His Royal Highness the Prince of Wales and Her Royal Highness the Princess of Wales receiving a large body of nurses at Marlborough House, as a mark of the interest which their Royal Highnesses take in their welfare. These and other signs are evidence enough of the "good times" in which nurses of the present day may be said to be cast. The occupation of a hospital nurse is undoubtedly an arduous one, and as such it is only meet that as much should be done for her, consistent with what is right and just. Women have found that the life, although being a hard one, is associated with certain features which they deem to be advantages; the result of this is that the number of applicants which are yearly refused by the authorities at the different nursing institutions, is enormous. In one which we know of, as many as three hundred young women were declined on account of the lack of vacancies in one year. Moreover, the class of women who present themselves at the Homes is vastly superior to that which used formerly to be the case. Ladies, strictly so-called, form a large percentage, and there is a gradual diminution in the number of applicants whose educational capabilities do not happen to be their strong point. Verily, the nursing profession is "looking up."

Erratum.—In our recently published Holiday Number, the article on Leamington purports to have been written by Dr. G. Brown, the newly-appointed Medical Officer of Health, whereas it was contributed by Dr. George Wilson, Medical Officer of Health Mid-Warwick District.

The London
Medical Recorder.

ARTICLE 669.

THE MONTHLY MIRROR OF MEDICINE.

OUR knowledge of multiple peripheral neuritis may be said to have grown up within the last five or six years. Of the various toxic agents which are known or supposed to give rise to the manifestations of the malady, alcohol is at present the most widely recognised. Of the other agents which have been found to give rise to typical symptoms of multiple neuritis, arsenic is not the least important. The number of cases of arsenical neuritis which have been recorded is not large, and Dr. Barton, of Norwich, has made a substantial addition to the literature of the subject by a contribution to the *Lancet* of July 19th. He records two well-marked cases, occurring in a man and a woman, who were husband and wife. The husband was a naturalist's assistant, and his employment was chiefly rubbing a powder, composed of arsenic and plaster of Paris, into the skins of birds and other animals. He carried on this work at home in a room set apart, but which his wife frequently cleaned out. The wife came under observation first, and the cause of the neuritis was not suspected. Two months later, however, the husband came under Dr. Barton's care, suffering from similar symptoms. Enquiry into his habits and occupation brought out the fact that he used arsenic in his work, and examination of his urine revealed traces of arsenic. The cases were typical, and are carefully recorded. Another case of multiple arsenical neuritis was recently reported in the *New York Medical Record*, by Dr. Stark. In this case the disease arose from a single large dose of arsenic taken with suicidal intent. An abstract of the case was published in the July number of the LONDON MEDICAL RECORDER.

Syphilis as a cause of multiple neuritis is the subject of a paper recently published by Dr. R. W. Taylor, of New York. Our knowledge of the influence of syphilis in the production of multiple neuritis is very limited indeed, and confined, as far as Dr. Taylor's search into medical literature extends, to some half-dozen cases. Dr. Taylor relates very full notes of a case of his own, in which a peripheral neuritis of syphilitic origin led, among other symptoms, to a series of lesions, especially in the hands and feet, very strongly resembling those of leprosy.

Microbes continue to receive a due share of attention. The more they are studied, the more clearly is it apparent that their *rôle* in the production of virulency and immunity is of an indirect kind; they produce those effects, in point of fact, through the agency of the chemical substances they create. M. Bouchard has published a highly important paper in the last number of the *Revue de Médecine* on the actions of the soluble products secreted by pathogenic microbes. The number of these substances is, beyond question, very great, and the number that we are acquainted with increases daily. Some of these substances are injurious to the infected individual, while others are, on the contrary, favourable. Again, some are injurious and some are favourable to the pathogenic micro-organism itself. M. Bouchard's paper deals largely with the question of how immunity is brought about in the animal body; how vaccination with certain kinds of virus renders the individual refractory to subsequent infection. Among the more important propositions which he formulates at the conclusion of his paper are: that certain pathogenic microbes secrete vaccinating materials (*matières vaccinantes*); that it is not by its presence as a preventive agent that the vaccinating material confers immunity, but that it impresses the animal organism in such a way that, even after its elimination, the tissues remain less favourable to the life of the microbe in question. Another effect is also produced on the organism; the activity of the cells is so changed that, even after the elimination of the vaccine material, the leucocytes, in presence of the same microbe, perform their function of devouring the microbes (phagocytes) more energetically. Dr. Hankin, in a Report just published for the Scientific Grants Committee of the British Medical Association, deals with the conflict between the organism and the microbes. He considers it a remarkable fact that experimenters have, hitherto, quite failed to identify the nature of the poisons involved in the production of immunity against disease. He believes that it has been too readily taken for granted that ptomaines, or poisons of this nature, were concerned in the production of the immunity. Dr. Hankin believes it is rather the poisonous proteids than bodies of an alkaloidal nature that are the real immunity-giving poisons. These poisonous proteids he terms "defensive proteids."

In Dr. Amand Ruffer's recently published preliminary note on the processes taking place in diphtheritic membrane, the author makes the important observation that the bacilli of diphtheria are present in the most superficial part of the membrane only, that is, a place well within the reach of medicinal agents. A large number of wandering cells are contained in the meshes of the reticulated network of fibrin which composes the dipheritic membrane. They are of two kinds: some smaller mono—or multi—nucleated (microphages); and others, less numerous, much larger, with a single clear vesicular nucleus (macrophages). These are found engaged in taking into their interior and disintegrating the specific bacilli. Some cells indeed are very voracious, and contain as many as five or six micro-organisms. Dr. Ruffer lays down the proposition that the diphtheritic membrane is the battle-field for amœboid cells, and the pathogenic microbes of diphtheria.

It might seem difficult to say anything new about acute rheumatism, but we think Dr. Robert Bell has succeeded in doing so. In a recent number of the *Lancet* he expresses the opinion, the result of fifteen years' experience, that acute rheumatism very rarely attacks individuals whose bowels are in a healthy condition. He thinks the predisposing cause is very frequently in the vitiated condition of the blood arising from fæcal absorption. The disease itself he holds to be due to a microbe, which finds an easier nidus in the blood when thus vitiated. The strongest argument in favour of his theory is, that he can cure his cases by keeping the lower bowel empty by means of frequently repeated enemata. Not that Dr. Bell would discard salicin and other drugs, which, no doubt, have a direct action on the pathogenic micro-organism, but the effect of these drugs will be found more pronounced and more permanent by the employment of simultaneous enemata.

MECCA has had a severe visitation of cholera, as many as 135 deaths occurring in one day.

ARTICLE 670.

THE MONTHLY MIRROR OF SURGERY.

THE operative treatment of lesions of the brain and spinal cord has proceeded apace within recent years. The mass of literature which is gradually accumulating upon the subject not only shows that great advance has been made, as may be judged from the cases recorded, but it also affords reason for believing that even much greater triumphs will probably in the future be attained by surgeons in this department of surgery. In accounting for this satisfactory condition of things, it is indisputable that the incentive to deal surgically with cerebral lesions certainly came from the light which was thrown upon our knowledge of the localisation of cerebral functions by distinguished investigators, and notably by Dr. David Ferrier. Surgeons also, by experience, have found that the brain is tolerant of interference to a much more considerable extent than used formerly to be supposed. Indeed, under the present favourable conditions of wound-treatment, there is scarcely any untoward complication to be anticipated, as the immediate result of surgical interference in lesions of the brain. Apropos of this subject, one may now proceed to draw attention to some cases of the kind which have been published within the past month.

In the first place, we note a case of trephining for paralysis of speech, following an injury, recorded by Dr. J. D. Jones, in the *New York Medical Journal*, for July 12th. The patient was a woman, aged twenty-six, of healthy parentage, who had previously enjoyed good health, but was of questionable morals, and occasionally drank to excess. After three days' absence from home on one of her "excursions," she was discovered in an outhouse, unable to speak or move, but conscious. About four days afterwards, the author saw her. He then found complete motor paralysis of the right leg and arm, the right side of the face was paralysed, the tongue deviated to the right; she felt the prick of a pin over the paralysed area, but sensation seemed to be impaired; she could not utter a word, except "No," and this was her universal answer to every question. She appeared to be rational, and to understand everything that was said to her. Pulse and temperature: normal. There was a large ecchymotic spot above the left eye; there was no wound of the soft parts, and no depression could be felt in the bones. From the signs thus enumerated the diagnosis of pressure by a blood-clot was arrived at, probably from a fracture of the inner table. She gradually recovered the use of the leg and arm, the former first; but with the exception of the addition of "I can't" to her vocabulary, her speech remained unimproved. At a consultation, some four months after the receipt of the injury, the opinion was unanimously expressed that the symptoms pointed to pressure on the centre for speech and motor area on the left side, probably by a clot, an operation being advised. The latter was accordingly undertaken, the trephining over the speech-centre being done. In the course of the procedure, alarming hæmorrhage occurred, before the section through the bone had been more than half completed. The button of bone, however, was rapidly removed, the dura mater opened, and the finger introduced between the dura and pia mater, and pressure applied. Afterwards, it was found that the blood had proceeded from one of the large diploic veins. The pia mater was opened, but no clot was found. The brain-tissue, however, in this locality was evidently diseased. No sutures were inserted in the brain-membranes. When all bleeding had ceased, the wound was dusted with iodoform, a drainage-tube was introduced into the most dependent part, and the scalp-flap closed with interrupted silk sutures, antiseptic dressings being used. The progress of the case was marked by attacks of delirium, but ultimately recovery ensued. The drainage-tube was removed on the fourth day; on the twentieth day, she was going about, feeling well. On the third morning after the operation, she greeted the author with "Good morning," and addressed him by name. She can now repeat any word spoken to her, and has already quite a vocabulary of names of articles of food, bed-clothing, etc.—names she hears repeatedly and which she uses correctly.

A paper of much interest and importance on six severe operations, entailing prolonged manipulation of the brain, is contributed to the *American Journal of the Medical Sciences* for July, by Dr. Jacob Frank, of Chicago. The first case is described as "Terminal Dementia of alleged Traumatic Origin." Trephining and exploration of brain, with great improvement, lasting nine months; relapse. Second operation; marked and increasing improvement. We have not space here to do more than briefly refer to it, but the interesting details with which it abounds will, doubtless, afford attractive reading to those who have devoted their attention to brain-surgery, and the case may well be read in conjunction with the cases of trephining which have been done in this country, at the suggestion of Dr. Clay Shaw, for general paralysis of the insane. The patient, to whom the notes of the first case refer, was a woman aged twenty-eight, who became deranged; there was a history, more indefinite than otherwise, of a blow having been received upon her head. This happened one day while she was coming up a cellar-stairway. She was stunned by the blow, and delirium, lasting a few hours, resulted. She was admitted into the asylum a short time afterwards suffering from subacute mania, and, about seven months subsequently to this, was discharged from the asylum and sent home as incurable. The father, believing the cause of his daughter's insanity to be due to the alleged traumatism, was extremely anxious that an operation should be done, and the brain examined. Upon her re-admission into the hospital, it was noted that she walked with a shuffling gait and dejected air, that she was constantly muttering, and had a vacant look, wandering aimlessly about, picking and tearing at her clothing, and that she was heedless of the calls of nature, often soiling herself. It was impossible to attract her attention for a moment. She had to be fed by the nurse, and this was only accomplished with much persistence and difficulty. There was no paralysis, or abnormalities of general sensation, or the reflexes. It was agreed to trephine and explore. Upon opening the dura mater there was a gush of cerebro-spinal fluid, probably four ounces, at once escaping, and the arachnoid and pia mater looked œdematous and jelly-like, all the meshes being filled with the same colourless fluid. The œdematous arachnoid presented high vascularity, and threatened serious hæmorrhage if interferred with. In attempting to take up the engorged vessels the tissues tore through, but surprisingly slight bleeding occurred. Consequently, with dissecting forceps in each hand, the turgid vascular membranes were freely stripped from the convolutions, once the entire field of operation, and the flow of blood was readily controlled by a little pressure. With fingers and a spoon-handle the vulci were carefully opened and examined, but nothing abnormal could be found. Finally, a minute portion of the brain-tissue was removed for microscopical examination. The cortical region exposed embraced the ascending convolutions in the area for the arm-centres, and the middle third of Rolando's fissure. The patient rallied well after the operation, and no convulsions, vomiting, or stupor supervened; but a gradual gain in mental power, memory, habits of cleanliness, and deportment, was noticed from the first. Some paralysis of left hand and arm occurred later, perhaps from interference with the arm-centre at the time of operation. But this loss of power gradually disappeared, and the patient was subsequently discharged, and returned home so much improved that in the opinion of her friends she was no longer insane. A relapse, however, occurred ten months afterwards, and she was re-admitted into the asylum again, her mental condition being just as bad as it was before the operation. A second operation was done (for the details of which the reader is referred to the original article) at the site of the former one. The inside of the skull and dura mater, and the surface of the convolutions, was explored with the finger, as far as could be reached in all directions with the finger, without encountering adhesions or anything abnormal. The brain now seemed to fill the cranial cavity properly, and there was no excess of fluid. The patient rallied and did well, the same successful result following the operation as was noticed on the first occasion. Before being discharged she became well enough to be trusted to do little tasks, and to run errands about the hospital. She was very neat and orderly, and expressed herself as feeling very well, without pain or discomfort.

The next case was one of Jacksonian epilepsy. Trephining and removal of branching sarcoma; improvement of all symptoms; relapse from probable recurrence of neoplasm. Another of the cases was one of idiocy with generalized and continuous choreic movements of seven years' duration. Trephining over motor zones; complete cessation of movements with paralysis; death on the third day; fracture of the skull; subdural hæmorrhage localised. Trephining and removal of clots, with relief of symptoms; death due to intra-abdominal hæmorrhage from ruptured liver.

In these operations, observes the author, a number of practical points were developed. The control of scalp hæmorrhage, with the interlocking stitches, was very satisfactory, and when black and white silk were alternated the manœuvre could be quickly and readily executed. The use of irrigation on the brain-tissue, though not heretofore advised, proved a great help in clearing the field of obscuring blood, and properly employed with a low pressure seems perfectly allowable. It certainly is less severe upon the cerebral structure than sponging. As to drainage, tubing undoubtedly has the disadvantage of being bulky, but the large amount of fluid regularly discharged in such cases requires an adequate means of escape, otherwise pressure will be brought to bear on the dural flap, and probably defeat its union by first intention, upon which so much depends. The dressings must be such as to care for this discharge, and for the same reason require frequent changing. When the bone is to be replaced, it should be taken out in as few pieces as possible, preferably in a single piece. The return of small fragments and chips, as shewn in these cases, is of doubtful utility. Efforts may profitably be directed to securing the returned bone to the cranium in the most desirable and favourable position for immediate union and the prevention of deformity. Upon this, ultimate success, and the long protection of the encephalon, may hinge. The tolerance of the brain in prolonged and vigourous manipulation is forcibly demonstrated, and its recuperative powers, after injury and regional loss, is again made manifest.

Closely connected with the subject of brain-surgery is the consideration of the cerebral lesions, which develop as the result of affections of the ear. In this regard, Dr. O. Horner has published a useful paper in the *Revue de Laryngologie* (iv., 1890), under the head of statistical contributions to the study of cerebral abscesses arising from lesions of the ear. He collected the notes of a hundred cases. In sixty-two cases the abscess was situated in the cerebrum; in thirty-two cases in the cerebellum, and in six cases in both. In children, abscess of the cerebellum was less frequent than in the adult. The right side was more frequently affected than the left, the abscesses being in close proximity to the primary lesion, and often continuous with it. The most frequent complication met with was thrombosis of the transverse sinus. In seventeen cases purulent phlebitis had occurred. In ten cases death ensued in consequence of the rupture of the abscess into the lateral ventricle, and in one case the rupture had taken place into the fourth ventricle. With regard to the diagnosis of the seat of the abscess, in all these cases the exact locality of the primary lesion will have to be determined, and full consideration attached thereto. The pain, or percussion, at the seat of the abscess is an important sign; it is, however, only to be met with when the lesion affects the temporal lobes. Not much importance can be attached to the complaint of spontaneous pain, and the giddiness which is met with occurs irrespective to the situation of the abscess. Hemiplegia and hemiparesis were noted in six cases; in two cases, moreover, double facial paralysis had ensued. In cases of abscess of the temporal lobes, most frequently the facial paralysis of the same side is caused by the nerve being involved by the lesion extending from one side to the other.

Article 671.

THE TENTH INTERNATIONAL CONGRESS AT BERLIN.

It has been evident all along that the Congress which was to be held at Berlin would be an unqualified success, and though it is sometimes necessary to discount the reports that reach one beforehand, such was not the case on this occasion, for the number of adherents and the general harmony of the proceedings left nothing to be desired. Numbers, of course, are not everything at such meetings, but it is the only criterion by which we can for the time estimate success; and the presence of 5,000 members of the profession, gathered with one accord from the uttermost corners of the earth, must be construed in a very favourable light. This result is due doubtless in part to the geographical situation of Berlin in the middle of a thickly populated continent, but the preponderating position of German science must also be credited with a share. Moreover, all that is eminent in medicine—all the names with which the readers of medical literature must by this time be familiar, in whatever country they may live, were to be found enrolled in the lists; and as one of the objects which tempt men from distant parts of the world to attend these congresses is the not unnatural desire to see *de visu* the medical celebrities whose opinions they have been accustomed to listen to with deference and respect, the presence of these—the aristocrats of the profession—gave the *éclat* without which no Congress can be an entire success. It is satisfactory to note that the outcry which, somewhat late in the day, had been raised by certain susceptible French patriots against French representation at the Congress, failed to introduce an element of discord, and by their conduct towards the French delegates the German doctors showed their appreciation of the courage which had led the French delegates to disregard the abuse which will certainly be their lot, on returning to their native land, at the hands of those who preferred to sulk at home. Englishmen, on the other hand, have every reason to be proud of the reception accorded to their medical representatives, for nothing could be more touching than the spontaneous ovations accorded to such veterans as Sir James Paget and Sir Joseph Lister; indeed, the latter must have found his triumphal march occasionally a trifle tedious, if, indeed, such tributes to one's eminence can become so.

The greatest credit reflects on those who were responsible for the management of the Congress, for, notwithstanding the unprecedented affluence of members, there were but few hitches in the proceedings, and those of a kind inseparable from the mobilisation of a vast army of untrained troops suddenly called into the field. Of the scientific value of the meeting it is, of course, impossible at present to form an opinion; and by the time the concrete results are accessible, one's interests in the proceedings will probably have faded away to a large extent. Indeed, the value of these *réunions* is largely of quite another kind. Their effect, if not their object, is to enable the profession to come into touch with itself in a way that can never be the case while individual workers are separated by geographical obstacles and the differences of language. They serve, as the President, in his opening address, so truly remarked, to impress the mind with the conception that medical science is bound up with our common humanity, and they tend to raise the practice of medicine from the dead level of a mere livelihood to make it what it really is (or should be)—a pursuit above and outside of callings which have mere money-making for their objective.

Turning to the social aspect of the Congress, a department by no means without its importance, we are fain to admit that the hospitality of the people of Berlin was dispensed on a scale of unaccustomed magnificence. True, critics will be found to complain of having been left out in the cold, but it is obvious that there are limits to the entertaining powers, even of such a city as Berlin. There were sundry receptions, but attention was mainly concentrated upon the *fête* offered by the municipality of Berlin in the palatial Rathhaus. The invitations to this were early exhausted, although over four thousand were issued. A good many more than this number, however, contrived, "by hook or by crook," to be present, and the spacious halls of the Hôtel de Ville were thronged with a crowd, the like of which has rarely, if ever, been seen. As a dinner, the affair was possibly a failure, but as a *kneipe*, to use a German term, it was probably without a precedent. The scene, both within and without, was animated in the extreme. Without, along every street leading to the building, were endless files of carriages with white-cravated and impatient guests, who were received at the top of the main staircase by the municipal officials, "arrayed as one of these." Then the visitor walked through hall after hall, room after room, and past table after table, all occupied to repletion with guests who had been fortunate enough to find a place at this festive board, served up in Gargantuan style, at which eatables were scarce, in spite of the abundant supply, but at which, *en revanche*, drinkables were provided in sinful profusion. Later in the evening, when the buffets had been sacked, and the waiters deprived of the opportunity of making themselves useful, there was a general promenade, more boisterous, perhaps, than one would have expected under the circumstances, and characterised by a good humour which by no means savoured of asceticism. It was long after midnight before the building began to disgorge its contents, and dawn had long since merged into broad daylight before the tired officials could close the doors and go. The entertainment is said to have cost the municipality upwards of 250,000 marks, or, in round figures, £12,000. Several of the receptions were given *al fresco*, and proved far more enjoyable, on account of the sultry weather, than the more formal gatherings indoors. A certain number of the elect were invited to attend at Potsdam to be received by the Emperor; and although the Emperor himself was unable to be present, a very agreeable afternoon was spent by the delegates inspecting the grounds and the palace, before and after the reception. The last of the series was a *fête*, offered by the medical profession of Berlin to their foreign and provincial brethren, in the Kroll Gardens, which were brilliantly illuminated and decorated for the occasion. On the whole, the numerous visitors to the Congress will have regained their homes with the impression of having passed a very agreeable and instructive week, and we shall shortly be enabled to give an idea of the scientific results which the meeting will have been the means of eliciting.

ARTICLE 672.

ALCOHOL AND LONGEVITY.*

An elaborate paper has been recently published by Dr. E. MacDowell Cosgrave on the relation of alcohol to longevity. The paper presents an account of the various efforts which have been made from time to time to estimate the mortality caused by alcohol, and the evidence which can be given upon the subject. The sources of information which Dr. Cosgrave has employed are: (i) Direct investigation into the causes of a number of deaths. (ii) Experience of benefit societies. (iii) Experience of insurance societies. From a careful analysis of reports and documents bearing on the subject, he has been able to bring together a series of statistics which point unmistakably to the fact that the use of alcohol is unfavourable to the prospects of longevity.

The mortality of persons engaged in the liquor-traffic, as derived from a study of the Annual Report of the Registrar-General for England, is first considered. Here we find that, taking the average mortality of all males as 1,000, that of innkeepers, publicans, and beer-dealers was 1,521, and of public-house and hotel servants 2,205. This is supported by the experience of the Scottish Amicable Life Assurance Society from 1826 to 1876, which shows that the mortality among males occupied in inns and public-houses was 68 per cent. in excess of the Actuaries' or Healthy Males Table. The vital statistics of the intemperate are next dealt with. Mr. Neison, in his well-known work on "Vital Statistics," has worked out this point; he obtained particulars as to age, habits, &c., of a large number of persons, and was thus enabled to work out an immense number of averages. His tables show, side by side, the death-rate of the intemperate, and the general death-rate (which, of course, includes the intemperate, and must be raised by them above the general death-rate of the temperate). His first table of all ages taken together shows that while the number who ought to have died, according to the general death-rate for England and Wales, was 110, the number of intemperate who died was 357. Another table shows how fearfully the expectation of life is lessened at all ages by the contraction of intemperate habits.

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*Dublin Journal of Medical Science, July, 1890.

In 1878 the Harveian Society appointed a committee to investigate the question of the mortality from alcohol. The committee collected information from medical men as to the habits of 10,000 cases, above twenty years of age, whose deaths had been registered. Of these 7,505 were certified by private practitioners, 1,183 in workhouses, infirmaries, and lunatic asylums, 646 in hospitals, and 666 by inquests. The result showed that, of the whole number of deaths, 1,005 were accelerated or partly caused by its abuse, and 397 were wholly due to alcohol. This gives 1,402 deaths, or 14 per cent., in the causation of which alcohol appeared to have played some part. This would correspond to an annual adult mortality for England and Wales of 38,971. It might be thought that in the return of the Registrar-General the true mortality arising directly from alcohol might be found. This is not, however, the case. The yearly deaths from intemperance entered in the returns of the Registrar-General for England have never been higher than 1,400 or 1,500. The fact is that, at present, alcoholism is only given as the cause of death when present in some acute form such as *delirium tremens*. In most other cases there is some other disease, caused or rendered more fatal by the alcoholism, and it is this disease which is registered. In 1885 a systematic attempt to arrive at the alcoholic death-rate was made by the British Medical Association. Circulars were issued to the members of the Association, asking them to fill in from the counterfoil of their death-certificate books particulars of each case, noting whether they were (*a*) total abstainers, (*b*) habitually temperate, (*c*) careless drinkers, (*d*) free drinkers, or (*e*) decidedly intemperate. The report was presented by Dr. Isambard Owen at the annual meeting in Dublin, in 1887. The following sentences in the summary of the report deal with the question of longevity:—That habitual indulgence in alcoholic liquors, beyond the most moderate amount, has a distinct tendency to shorten life—the average shortening being roughly proportional to the degree of indulgence. That of men who have passed the age of twenty-five, the strictly temperate, on the average, live at least ten years longer than those who become decidedly intemperate (we have not in these returns the means of coming to any conclusion as to the relative duration of life of total abstainers and habitually temperate drinkers of alcoholic liquors.) That total abstinence and habitual temperance augment considerably the chance of a death from old age or natural decay, without special pathological lesion.

One set of figures in the report was made much of by certain people, at the time, as tending to show that total abstainers died at an earlier age than moderate or even excessive drinkers. The fact is that out of the 4,234 cases whose deaths were analysed, there were only 122 deaths of total abstainers,—a very small proportion, indeed. That their average age was not high is explained by the fact of widespread total abstinence being a comparatively recent thing; the average age of abstainers is consequently not as high as the average age of non-abstainers; consequently, when the deaths of abstainers are analysed, the average age must be comparatively low.

Most important assistance, in determining the relative health and death-rates among abstainers and non-abstainers belonging to the same class, is afforded by certain actuarial reports on the various Friendly Societies which have lately been published. Three societies have recently had their returns analysed—the Foresters, the Oddfellows, and the Rechabites. The latter society is one for total abstainers only. Mr. Neison's tables of the relative rates of mortality for the three societies show that a decidedly lower rate of mortality runs through the Rechabites. Another table shows that at the age of twenty the expectation of life among the Rechabites is more, by about four years, than the experience of the Oddfellows and Foresters.

The statistics of Insurance Societies furnish us with further proofs of the lower rate of mortality among abstainers. Careful actuarial examinations have been published, since 1866, by the United Kingdom Temperance and General Provident Institution. It is shown that in twenty-four years, from 1866 to 1889, 6,894 deaths were expected in the General Section, and 6,645 occurred; whilst in the Temperance Section 4,542 were expected, and only 3,198 occurred. The Sceptre Life Association made a very important contribution to the knowledge of the effects of alcohol on longevity, by the publication of Mr. H. W. Manley's Report on the Mortality Experiences in the General and Temperance Sections respectively. A marked difference is shown in favour of the Temperance Section. The experience of some other societies containing a temperance and general section is the same.

Such are the chief sources from which information can be derived bearing upon the effects of alcohol on longevity. It will be seen that the effect of alcohol in shortening life is very great, when alcohol is taken in large quantities; but it also appears that if a large number of people who consume alcohol in moderate quantities are compared with a number, similar in other respects, but not taking alcohol at all, the longevity of the latter will be superior to that of the former.

J. B. Ball, M.D.

Article 673.

THE CAUSE OF SPORE-FORMATION IN ANTHRAX BACILLI.

Of all the problems which concern the bacteriologist, the reason why bacilli form spores under some circumstances, and do not form spores under others, must be considered one of the most interesting, if not, indeed, one of the most important. The question, too, closely concerns the hygienist and the practical physician. It is a well-known fact that the spores of bacilli are much more difficult to destroy than the mere vegetative bacilli themselves. Thus it happens, that any reliable information as to the exact conditions of spore-formation comes to be hailed with so much satisfaction. An example of such information is afforded by a paper of Prof. Buchner, of Munich, who has taken the trouble to bring together some of his earlier work upon this question of spore-formation, done with anthrax bacilli as the most convenient and best known of micro-organisms. His paper was written for and read before the Würzburger Physikalisch-Medicinischen Gesellschaft, in February last, and was a reply to Dr. K. B. Lehmann, who had performed a research upon the subject of spore-formation, the results of which, in the opinion of the experimenter, had contradicted views upon the subject which Professor Buchner had formerly expressed. Buchner commenced by drawing attention to the fact that Lehmann's paper did not really deal with the main problem, but was directed to proving erroneous certain ideas which Buchner said, he believed, had never been held by anybody, certainly not by him. "Everything I have published upon this question," he goes on to say, "consists of a single sentence which occurred in my communication on anthrax contagion in 1880, and was to this effect:—'*The physiological cause of spore-formation lies in the absence* (? or *exhaustion*) *of nutritive material.*' I distinctly said—'In the *absence* of nutritive material,' and I did not say, '*in defective nutrition in general.*' In truth, I believe that in order to get a good formation of spores, it was always necessary to have a well-nourished culture. The ground of this belief, which I have been in the habit of bringing forward in my lectures at the University, was the following experiment carried out:—On December 10, 1877, into a watch-glass was placed one drop—and into a second watch-glass 2 ccm.—of a sterile solution, consisting of 0·2 grms. peptine and 0·2 grms. flesh-extract in 100 ccm. of distilled water. The watch-glasses were protected against dust and evaporation. At 12 noon, both of these samples were sown with anthrax bacilli free from spores, and they were placed in the incubator at 37°. At 6 p.m. one platinöse of the fluid, in watch-glass No. 2, was used to infect a third watch-glass containing a similar amount of the fluid. The next day, the result of the experiment was, that in the watch-glass which contained only one drop of nutritient solution were found abundant anthrax-threads, all filled with spores; but in the third watch-glass, although there were also threads, there were no spores. I have often repeated this experiment with a similar result. It is a fact, then, that, if a regular renewal of nutritive solution be provided before the development has reached a given point, countless generations of merely vegetative growth occur; but if one neglects only once the due renewal of the materials of growth, there shews itself—*if the conditions are otherwise favourable*, e.g., *temperature*, *moisture*, *and oxygen*—spore-formation. The true cause of spore-formation must be either the occurrence of want of nutritive material, or the accumulation of decomposition-products of the bacilli. The question, as to which of these causes is the real one, is answered by the following experiment:—On December 11, 1877, there was placed in two watch-glasses two different fluids; into one, a drop of distilled water, into the other, a drop of a putrid meat-fluid, rich in products of decomposition, which had been diluted one-half with water, and boiled. Both of these were sown with anthrax-threads free from spores, and placed in the incubator at 37° C. Next day, in the putrid fluid, threads without spores and bacilli were found; in the water, the threads had changed into spores arranged in rows, between which, even with iodine, no intermediate substance nor remnant of vegetative cells could be demonstrated. Distilled water, then, had in this experiment an exceedingly beneficial effect on spore-formation—a result which later investigations amply confirmed. *The decomposition-products did not appear to have any accessory influence.* It is evident from this that it is *the absence of nutritive material which induces spore-formation*, and I have again and again confirmed this by experiment. The formation of spores takes place in all the vegetative cells, the more quickly and perfectly according to the quickness and perfection of the previous vegetative growth. The best-nourished anthrax bacilli produce the most abundant spores, but the using up of the nutritive materials must always occur before the spores begin to form. This using up of the nutritive medium, however, need be only local; it is not necessary that the whole nutritive ground should be exhausted. On the surface of a solid nutritive ground, absence of nutriment may occur to the superfical layers of bacilli, whilst those layers of the jelly beneath may still contain an abundant supply of nutriment."

Buchner next attacks the question of the intensity of spore-formation in given cases. By this he means the total number of spores which result from a given number of bacilli in a given time, and it is quite obvious that he is right when he states that, in order to find out the most favourable conditions of spore-formation, the time for each series of experiments must be limited and short. As regards the absence of spore-formation in dead animals, Buchner thinks that it is due not to want of oxygen—a want which does not exist—but to the practical impossibility of using up the nutrient material. Spore-formation quickly occurs in drops of blood and other cadaverous fluids of animals dead of anthrax, because such a using up of the nutriment is then possible. He further says: "I by no means deny that other circumstances—especially abundant supply of oxygen, raised temperature, and a due degree of moisture—are also favourable to spore-formation; but they exert a favourable influence in producing an intense growth, and have no specific influence on spore-formation except in so far as they cause the growth to be particularly strong; the quicker the growth the sooner is the nutritive material used up. In those bacilli which, like anthrax, form thick superficial deposits on the nutrient medium, one finds that spore-formation occurs in the upper strata, whilst only vegetative cells are formed below. No doubt, however, other factors, not yet understood, enter into the favourable conditions which produces spore-formation. These deserve investigation. I think that *a certain amount of chloride of sodium decidedly favours spore-formation.*"

We may thus summarise Buchner's views:—(i) Relative intensity of spore-formation should be the direct guide to the conditions most favourable to spore-formation. (ii) An exhausted soil is the most important factor in producing the greatest intensity of spore-formation, especially when the vegetative growth has been rapid; an accumulation of products of decomposition in a nutrient medium is not a favourable accessory condition. (iii) A free supply of oxygen, the optimtrus temperature, and a proper degree of moisture, inasmuch as they increase the rapidity of the vegetative growth, and so cause the most rapid using up of the nutrient medium, must also be put down as favourable circumstances. (iv) Other conditions in addition, among which may be placed a proper supply of chloride of sodium, favour the formation of spores, but in what manner they act is unknown.

VINCENT D. HARRIS, M.D.

Article 674.

MENTAL DERANGEMENTS FOLLOWING INFLUENZA.*

It is not long since it was generally believed, and it is still believed by many, that fever has nothing to do with insanity, and that accordingly the delirium of fever should not be classed amongst true mental derangements. Esquirol said this (1838) and Berthier, of Bourg, repeated it (1861). But, even in 1844, Max Simon fought against this doctrine, and we now recognize that the distinction between febrile delirium and that of insanity is purely artificial. Every gradation has been met with between the former and the latter. Again, nothing is more variable than the presence or absence of delirium in fever, which depends chiefly upon the kind of individual attacked, and, further, the delirium does not proceed *pari passu* with the fever. Febrile delirium, during an infectious disease, is, in fact, an acute attack of insanity. There are the febrile mental derangements proper to the fever (*psychoses fébriles*), and there is the delirium of convalescence (*psychoses astheniques*). The latter embraces many distinct kinds. Towards the end of acute infectious diseases there is the "delirium of inanition," which may go on to the delirium of collapse, so well described by Weber (*Med. Chir. Trans.*, London, 1865, p. 135). But, though æsthenic delirium is the most common kind during convalescence (Christian, *Arch. gen. de med.*, Sept., 1873), other kinds are met with, sensorial illusions being often present. There is, probably, in such cases, a cerebral intoxication due to microbic products of the virus which has set up the disease. One great distinction between the psychoses of convalescence and the delirium of fever lies in the evident influence of heredity, and the personal antecedents of the patient, upon the character of the delirium in the former case (Kræpelin, Savage), in contrast to its uniform course in the latter; in fact, heredity appears to play the chief part, and the acute disease is often only the accidental cause of the mental alienation. The diseases most frequently followed by the latter are: acute rheumatism, pneumonia, small-pox, intermittent fever, typhoid fever, cholera, and erysipelas; more rarely, angina and scarlet-fever, and very rarely measles and whooping-cough. As to influenza, the psychoses which may follow it were scarcely ascertained before the last great pandemic. Pétrequin, who described the epidemic of 1837 (*Gaz. méd. de Paris*, 1837, No. 51), only cites Rush, of Philadelphia, and Bonnet, of Bordeaux. The former says, "several persons who were affected by it had symptoms of madness, one of whom destroyed himself by jumping out of a window." Bonnet reports a case of furious mania after influenza, during the epidemic. Crichton-Browne gives a case of acute dementia after the influenza of 1874. Revilliod, of Geneva (*Revue méd. de la Suisse romande*, March 10, 1890), has studied the nervous forms of "la grippe," and has shown that delirium may be the first symptom, as in other acute diseases. Ewald, of Berlin, cites the case of a child, seven years old, who went to school apparently well. When the class was dismissed, the child went off to a station and got into a carriage, saying that he was going to Leipsic. He was conducted home, but did not recognize the houses in the neighbourhood, and remained in a state of violent delirium for some days. Meanwhile, influenza showed itself. The author's cases belong to the period after influenza, when the fever has left. Some of Prof. Kræpelin's cases, and others, are also cited (*Deutsche med. Wochenschr.*, March 13, 1890, "Ueber Psychosen nach Influenza"). (1) *Melancholy and Hypochondriasis.* Insomnia is not uncommon. It is the first degree of mental trouble. The patient may be very disagreeable towards his doctor, who, if he takes the mind always into account, will regard this as an important symptom, instead of resenting it. Two cases of profound depression, with delusions, are given by the author. Kræpelin gives a case of "hypochondriac melancholy with delirium," which should be separated from other forms of melancholy. It is characteristic of senile evolution of the brain, and is frequent in predisposed women at the menopause. Martin gives a case of suicide after influenza. (2) *Asthenic Psychoses.* Here there is a rapid enfeeblement of the mind, an acute exhaustion containing, according to Prof. Kræpelin, four groups of cases: (*a*) The delirium of collapse, already mentioned; (*b*) hallucinatory dementia, or delirium, or stupor; (*c*) asthenic dementia (the "cerebral torpor" of Prof. Ball): and (*d*) acute dementia, or stupidity. All these forms, except the last, have been observed after influenza. Crichton-Browne gives a case of true acute dementia after influenza, whether epidemic or not is not stated (*West Riding Reports*, 1874). Of asthenic delirium, Prof. Pick gives a case. A girl, aged twenty, was admitted into the asylum in Prague, on January 8. Five weeks previously, she had been frightened by a conflagration, and by a savage dog that bit her. On January 4, had rigors, headache, and backache. During the night, gay delirium. Next day influenza showed itself, but the delirium, insomnia, and refusal of food persisted. There was complete confusion of ideas, and her humour was very changing. The face was pale, the expression gay; patella reflexes normal; temperature normal; pulse small, 96°. This condition lasted five days, after which she gradually recovered. Of the delirium of collapse, Kræpelin gives two cases. Acute or hallucinatory dementia is characterised by a well-marked prodomial period, frequent remissions, the long duration of the illusions and hallucinations (*Anglicé* delusions and illusions respectively), and lastly, the long course of the mental disturbance, the individuals being always hereditarily predisposed, and their cerebral nutrition profoundly affected. Mayser (*Allgemeine Zeitschr. f. Psyschiatrie*, 1886, p. 114), and Prof. Wille, of Basle (*Archiv. für Psychiatrie*, 1888, p. 328) have carefully studied this form, of which Esquirol has given an excellent description—too much neglected in France, because Esquirol mixed up other forms of insanity in the same chapter. It is wrong to consider dementia as always secondary, it may be the primary and only mental derangement. (3) *Other forms of mental disease.* Thus influenza, like other acute diseases, may be the last stroke in developing an attack of insanity, the kind of which is altogether independent of influenza. Even general paralysis has followed it, with the characteristic disturbances of speech, the loss of memory, the absurd hypochrondriacal delirium, and the ideas of grandeur. A young epileptic, who had no fits for nine months, passed into a condition of somnambulism directly after influenza, and a case of typical mania is reported from Dorpat, also another by the author. Kræpelin gives two cases of typical delirium tremens after influenza, the author one. Medico-legal questions have arisen out of the mental derangements of convalescence from acute diseases. Murders and other criminal acts have been committed, especially after intermittent fever. The following is an instance after influenza. On January 25, 1890, in the little town of Payerne (Switzerland), a young man, aged twenty-two, killed his mother at one stroke in a sudden attack of madness. He had always been well-conducted, though somewhat taciturn. He was quite ignorant of the deed just committed, and could not comprehend why he was arrested. He had just passed through a bad attack of influenza, and had also just lost a young sister from the same disease. Influenza in itself never causes insanity, and in the above case the loss of his sister was the exciting cause acting on a system enfeebled by the recent disease. Lastly, *La Nonna* is a grave nervous form of mental sequela of influenza. Of four persons attacked by delirium and coma, three had had influenza recently, the fourth typhoid fever (*British Med. Journal*, March 29, 1890). This was the result of an official enquiry on the Italian border of Austria. Again, at Zozzoi di Sorramontane, ten persons are said to have died of *la nonna* within a few hours! (See *Lancet*, April, 1890.) Drs. Pagello and Murer, who officially examined into this matter, found that they died of a sort of "exanthemous miliary contagious fever," a comprehensive term. They also declared that not one of the patients had died within a few hours; even the most rapid cases had lasted at least two days. The Vienna physicians consider *la nonna* (or *nonna*) as an asthenic psychosis, ending in lethargy and coma, occurring for the most part in persons overworked and exhausted in every way, who have not been able to attend to themselves during the influenza. The Italian word *nonna*, literally *grandmother*, may also be translated *old woman* or *sorceress*. Now, there is a well-known legend that when a sorceress touches a sick person with the end of the finger, he will surely die. The power of auto-suggestion is now sufficiently known, and, in a superstitious country, such beliefs must occasionally have sad consequences, especially amongst convalescents from a depressing disease like influenza. The prognosis of all these psychoses is usually favourable, and the treatment is self-evident — it should be "strengthening" in every sense of the term, and also soothing. E. J. EDWARDES, M.D.

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* *Annales Medico-Psychol.*, July and August, 1890.

ARTICLE 675.

RUSSELL ON ERRORS IN THE DIAGNOSIS OF INFECTIOUS DISEASES.*

THE early recognition of infectious diseases is a matter of importance to the community, and also closely affects the credit of the practitioner. Now that the control of these ailments has passed into the hands of the Local Government Board, opportunities of acquiring a knowledge of their symptoms are to a great extent taken away from the student. Examining Bodies, however, are awakening to the necessity of including the subject in their examinations, and signs are not wanting to show that the throwing open of the special Fever Hospitals for purposes of study will be but a question of time. This paper, then, is of importance as emphasising the errors that are constantly being made in the diagnosis of infectious diseases.

The first half of the article is a reprint of a report submitted to the Glasgow Committee of Health in April, 1890. It gives the history of a boy of ten, who was certified, on December 10th, as typhus, but on the arrival of the ambulance the house was found empty. No trace was found until three months later, when the father was reported to have died in the Paisley Infirmary of fever. It was found that the family had gone to a common lodging-house in the latter town. On 9th January the wife and three children were taken to hospital as cases of "enteric" fever, and the father next day. On the 21st the father died. On 17th February another lodger was recognised to have typhus. In spite of all efforts twenty-four cases of the disease followed, with six deaths. In another case a young man was certified as "enteric," but the disease was found to be typhus at the hospital. Five children and various others were found infected; the initial case had been treated as "inflammation of the lungs," and another as "enteric." On enquiry into 1,499 consecutive cases sent into the Belvidere Hospital as suffering from infectious disease, 114, or 7·6 per cent., did not suffer from the particular affection for which they had been sent in; and of that 114 no fewer than 85, or 5·7 per cent. of the total cases, had no infectious disease at all. Mistakes in scarlet-fever, measles, and whooping-cough are few. Three per cent. only of the scarlet-fever cases were wrong, and one per cent. only had no infectious disease. Measles showed a less, and whooping cough a rather greater percentage. Errors were excessive in enteric and typhus fever, and also in diphtheria. Seventeen per cent. of persons sent in with a diagnosis of enteric fever had not that disorder, and most of them had no infectious disease whatever. Of those certified as diphtheria, twenty-four per cent. were wrong, and about twelve per cent. had no infectious complaint. Forty-four per cent. of those diagnosed as typhus were free from that fever, and half of that proportion did not require hospital treatment. Of the forty-two cases erroneously designated enteric fever, fourteen had inflammation of the lungs; five, simple diarrhœa; four, disease of the brain; five, various chronic affections; and four, typhus: the balance of ten were absolutely non-febrile. Of the sixteen wrongly certified as typhus, three had pneumonia; one, purpura; and one, alcoholism: three had no obvious disease, and eight suffered from enteric. Where the diagnosis of diphtheria was mistaken, half had scarlet-fever, and the other half simple inflammation of the throat. In fifty-eight cases the cautious diagnosis of "fever" was given: twenty-four of these turned out to be enteric, nine typhus, six scarlet-fever, three measles, and one whooping-cough. Of the remaining fifteen, lung-inflammations accounted for nine, and three were non-febrile. Every case found not to have the disease designated in the removal-order involves, if the diagnosis be mistaken:—(i) The risk of eventual infection in the ward in which the patient is first placed; (ii) the shifting of the patient to another department; and possibly (iii) the importation of a fresh disease. If, however, the disease is not infectious at all, then (i) we have exposed some one to infection; (ii) when the patient is too ill for further removal we become responsible for his treatment in an infectious hospital; and (iii) unnecessary expense is imposed on ratepayers.

Although there will always be a certain proportion of error, yet the mistake of certifying a person with normal temperature to have fever can find no excuse. Another mistake which might be avoided is overlooking an obvious local disease, such as pneumonia, which might account for the fever present.

In 1883 Dr. Russell wrote:—The position of the Local Authority is this—it is commissioned to adopt measures for the prevention of infectious diseases by any method, direct or indirect. To this end nothing can contribute so much as a full and precise knowledge of the disease itself. While these diseases were treated in general hospitals, or in special hospitals supported by charity, they were studied in all their aspects, and with the best results. The distinction between enteric fever and typhus was thus worked out, and the facts for the classical work of Murchison on "Continued Fever" were accumulated in the wards of the London Fever Hospital. The managers of those institutions provided all conveniences and apparatus for such study as part of their duty in the public welfare. Now that the treatment is vested in the Local Authorities, it seems obvious that their duty does not merely consist in treating patients with economy and success, but in also taking means to turn their sickness to general profit by making it contribute to science and education.

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* *The Glasgow Medical Journal*, July, 1890.

Excluding fallacies in the figures taken from the Belvidere Hospital, the total errors of diagnosis reach twenty-one per cent. It is impossible to make any comparison with other hospitals, as no such statistics have hitherto been published. Considering the general interest and public nature of reports on infectious disease, it is not surprising that the deficiency of medical education in this respect should have become a burning question. Mr. Spear, a Local Government Board officer, reports, in 1866, that considerable outbreaks of typhus might occur without recognition, the disease being mistaken for typhoid, and concludes that practical instruction in this branch of diagnosis is wanted. In 1889 Dr. Glover advanced the subject before the General Medical Council in his "Gaps of Medical Education." He remarks that many men pass their examinations who have never seen a case of scarlet-fever. He admits it is impossible to be always right in these matters, and even the wisest physicians sometimes make mistakes. The Metropolitan Asylums Board reports, "Your Committee cannot fail to observe the large proportion of mistakes which are made in the diagnosis of cases of small-pox and fever." Dr. Birdwood, Medical Superintendent of the Hospital Ships, shows—first, that no serious attempt is made, or even possible, in our general hospitals to teach students infectious diseases; secondly, when they come to their examinations they are not tested in them; and, thirdly, when they come to the tests of practice they are found wanting.

Dr. Russell remarks, it is a curious illustration of the defects inherent to every step of human progress, that the absorption of the treatment of infectious diseases by special hospitals should have interposed a difficulty in the way of medical education The student, until now, never has had the necessity of the clinical study of these diseases impressed upon him. Now, however, the Glasgow Local Authority has offered the clinical facilities of the Belvidere Hospital to students free of charge, following the example of Edinburgh. Section 4 of the Poor Law Act provides that the managers may allow the asylums for fever, small-pox, and diphtheria to be used for purposes of medical instruction, subject to Local Government Board regulation. This clears the way for the use of the Metropolitan hospitals for clinical teaching. It is evident, from the recent resolution of the Medical Council, that the days are numbered when a diploma can be obtained without evidence from the candidate that he has availed himself of such facilities.

ARTICLE 676.

THE CONDITIONS OF SUCCESS IN CATARACT EXTRACTIONS.

IN a paper on the conditions of success in cataract extractions, published in the *Lyon Médical*, July 20, 1890, Dr. Grandclement makes the following observations:—Statistics show that out of one hundred cases of cataract extractions, about five patients lose the eye by suppuration or infection (panophthalmitis, suppuration of the cornea, iritis, or plastic irido-choroiditis). Moreover, half of the ninety-five patients operated on with success only recover partial vision; a fifth, a fourth, or half of the normal acuity. Would it not be possible to improve upon these results, so as to prevent the fine eyes from being irrevocably lost, and to diminish still more the number of cases in which only imperfect results in vision are obtained? After thus expressing himself, the author firmly and openly affirms his belief that the results to which he draws attention can be improved upon. He thinks that the enforcement of rigorous antiseptic principles would be enough to dispose of the cases of suppuration and infection; as to this fact there cannot be two opinions. The plan he adopts of giving effect to antiseptic measures is first to bathe systematically the eye to be operated on with a one-in-one thousand sublimate solution for four or five days preceding the extraction. The conjunctival cul-de-sac of most eyes, even those which appear to be healthy, affords cover to pyogenic staphylococci; and morbid germs can be introduced into the interior of eyes by means of instruments, and in weak and delicate persons are prone to work evil effects. It is important, therefore, to annihilate all micro-organisms before the operation and absolutely sterilise the field of operative procedures. Under the influence of full antiseptic precautions as here indicated, an eye scarcely shows any redness after an operation. The corneal wound heals in from thirty-six to forty-eight hours, and all untoward complications are avoided. After the tenth day the patient can be considered convalescent. In order to secure in all cases the best visual acuity, or at least the best that is possible, it is essential to bear in mind the two following precepts bearing upon the *technique* of the operation:—(*a*) The complete removal of the lens, even the anterior capsule of the lens if possible; (*b*) not to allow the iris, excised or not, to remain engaged or adherent in the wound, after the completion of the operation. With the object of expelling all the lens-substance, a large section should be made capable of permitting the lens to escape at one time. One is never likely to repent making too large a section, provided the latter is clear of the ciliary body; but it has often happened that too small a section has been made. The opening, too, in the capsule should be large; the capsule should be incised not only crucially, but all round, so as to involve the entire papillary margin. Again, all the visible particles of lens-matter in the anterior chamber should be removed by manipulation and massage, alternating with intra-occular injections. These injections should consist of distilled water. All this having been done, and before closing and bandaging the eye, the surgeon must pay especial attention to the iris, returning it into the anterior chamber if it has not been excised, and pressing back from the corneal wound the angles of the excised portion, if excision has been done. The author, then, makes some remarks upon the complications likely to arise in consequence of the iris being confined in the corneal wound, and refers to the statement that this condition of things may be the means by which septic germs may gain entrance to the eye, even after a long period subsequent to the operation, the germs in question being contained in the secretion of the conjunctival sac. By following out these details above described, continues the author, the progress of repair and recovery after cataract operations will take place without incident. All that is necessary for after-treatment is a few drops of atropine and a weak solution (1·4000) of sublimate, the patient attaining convalescence at the end of a fortnight. In cases of opaque capsule obstructing vision, needling should be done two months after extraction. Upon the subject of operating upon cases of immature cataracts, he observes that formerly he avoided doing extractions under such conditions, for the same reasons which have deterred other surgeons from doing so; but, in the present day, thanks to the use of intra-occular injections, alternating with well-applied massage at the time of operating, he does not hesitate to extract immature cataracts, and his results, he declares, are just as satisfactory as in those in which the cataracts are fully mature. The extraction-process is more troublesome in the former than in the latter case—that is all. In his opinion, nothing proves more plainly that an immature cataract can be safely extracted than the fact that some surgeons have successfully performed extraction, in cases of absolutely transparent lenses, in patients with progressive myopia. Under these circumstances of operating, the intra-occular injections are undoubtedly of great service in removing mechanically, automatically, the visible and invisible *débris* of a lens which is more or less transparent. H. Percy Dunn, F.R.C.S.

Article 677.

ON THE COMMA-BACILLUS OF CHOLERA.

In a recent number of the *Indian Medical Gazette*, Surgeon-Major Cunningham publishes some interesting observations on the comma-bacillus of cholera. His researches have led to the conclusion that several distinct species of comma-bacilli are associated with cases of cholera in Calcutta. Three very distinct species are present, which are not, as a rule, associated with one another, so that individual cases yield cultivations of one or other species only. Further, and this is a curious fact, the occurrence of the individual species, in so far as observations have yet gone, has appeared not to be related to any character in the cases, but to the localities from which they were derived, the cases furnished by the General Hospital being associated with one species, those furnished by the Medical College Hospital with a second, and those furnished by the Sealdah Hospital with a third.

The different species, when cultivated in nutrient gelatine or agar-agar gelatine, do not differ very conspicuously from one another in morphological characters. That occurring in materials derived from the Medical College is, however, mostly distinguishable from the others by the relatively larger size and slight degree of curvature of the individual elements, which have a great tendency to show vacuolution and beading. Very conspicuous differences, however, show themselves when we come to deal with the physiological tests. In regard to the rate of growth, the species derived from the Medical College Hospital is of slower development than the others, in all the media yet employed. When grown on potatoes, the different species furnish conspicuously different growths. The growth in the case of the species derived from the General Hospital forms thick, shiny, creamy strata, with a smooth, glistening surface and prominent lobulated margins surrounded by a zone of detached islets of similar material. The colour, at first, is pale yellowish, becoming gradually primrose, and ultimately strong yellow. At a certain stage, the growth very closely resembles a stratum of thick, healthy pus. The smell is peculiar, yeasty and vinous. The growth furnished by the comma-bacilli derived from the Sealdah Hospital is very different. It appears as a thin, diffuse stratum, which is at first almost white, and ultimately of a brownish tint. It has neither the shiny surface nor the prominence of the previous growth, and the odour, in place of being yeasty, is of a characteristic, mawkish, choleraic character. The surface is marked by radiant lineations, and in general appearance it resembles a thin, crustaceous lichen-thallus more than anything else. The growth in the case of the third species is at first greyish white, becoming pale buff in old and dry specimens. It is prominent, dry looking, and raised into jutting wrinkles and folds.

In microscopical characters the growths differ from one another in the following respects. The yellow growth connected with materials from the General Hospital at first shows distinct commas, but in a short time comes to be almost entirely composed of micrococcoid bodies. That connected with materials from the Sealdah Hospital is characterised by much greater persistence of recognisable commas of considerable thickness. That derived from materials connected with the cases in the Medical College Hospital consists of commas of various sizes embedded in a tough, zooglœar basis, which is very adherent and difficult to wash off and stains deeply with gentian violet. When, in place of potato-cultivations, we employ cultivations in nutrient broth, treatment with nitric and sulphuric acids, as ordinarily employed to develope cholera-purple, at once serves to distinguish the commas connected with the cases in the Medical College Hospital from the other two species.

We have here conclusive evidence that there are at least three distinct species of comma-bacilli associated with cholera. The recognition of this fact suggests a means for reconciling the conflicting statements at present prevalent in regard to various points of detail in their life-history. The fact that experienced and acute observers should differ diametrically from one another in regard to what should be such an easily determined point as the capacity of spore-formation in choleraic comma-bacilli under definite conditions, was almost inexplicable so long as it was assumed that only one species was related to cholera. But the discovery of a plurality of choleraic comma-bacilli not merely gives us a satisfactory explanation of differences in opinion in regard to points of detail such as have just been referred to, but conclusively demonstrates that no one species can bear an exclusive and specific relation to the occurrence of the disease. It strongly tends to lead to a belief that those observers are in the right, who, like Klein, maintain that the comma-bacilli have no causal relation whatever to the disease, and, at all events, shows that it is folly to regard one particular species as the specific cause of it.

The "Father of Sanitary Science," Sir Edwin Chadwick, has died, full of honours and years, at the age of 91.

Anatomy and Physiology.

RECENT PAPERS.

678. **Luff, Dr.**—On the Absorption of Drugs from Ointments. (*Brit. Jour. of Dermatology*, June, 1890.)

679. **Palattchenko, Dr. Serghei.**—On the Assimilability of Bovine Lungs and Liver. (*St. Petersburg Inaugural Dissertation*, No. 65, 1890, p. 56.)

Art. 678. *Luff on the Absorption of Drugs from Ointments.*—The author describes some experiments he has made with the object of ascertaining to what extent drugs spread upon the skin in the form of ointments are absorbed into the general circulation. The several ointments containing soluble drugs were prepared, and each ointment was placed inside a sheep's bladder; the bladder was suspended in a beaker of distilled water, kept at a uniform temperature of 98° F. in a water-bath. The ointments were prepared with three different substances as a basis, viz., vaseline, lard, and lanolin. The results of these experiments are thus classified:—Vaseline and iodide of potassium, exosmosis commenced at end of *one hour;* lard and iodide of potassium, at end of *nine hours;* lanolin and iodide of potassium, *nil* at end of *twenty-four hours;* vaseline and carbolic acid, exosmosis commenced at end of *two and three-quarter hours*; lard and carbolic acid at end of *seven hours;* lanolin and carbolic acid, *nil* at end of *twenty-four hours;* vaseline and resorcin, exosmosis commenced at end of *ten hours;* lard and resorcin, at end of *fifteen hours;* lanolin and resorcin, *nil* at end of *twenty-four hours.* These experiments have all been performed with sheep's bladders, but the author hopes to be able to publish the results of further experiments on the living subject. The practical lesson to be learnt from this paper is, that if an ointment is employed with the view of its active ingredients being absorbed, then vaseline is by far the best excipient to use; but if an ointment is employed for its local effect only, absorption of its active ingredient not being desired, then lanolin is the best excipient for such an ointment.

Richard Neale, M.D.

679. *Palattchenko on the Assimilation of Bovine Lungs and Liver.*—In order to determine the dietetic value of bovine lungs and liver (which food-articles are largely consumed all over Russia), Dr. Serghei A. Palattchenko, of St. Petersburg, has carried out fourteen experiments on healthy working-men, aged from 23 to 39. Of the fourteen experiments, (*a*) two lasted two days, during which lungs alone (from 558 to 750 grammes daily) were given; (*b*) two were of the same length, during which liver alone (from 404 to 608 grammes a-day) was ingested; (*c*) two of similar length, during which the subject received lungs and rye-bread; (*d*) two ditto, liver and bread; (*e*) three one-day experiments, during which rye-bread alone was allowed; and (*f*) three experiments, each of fifteen days' duration, in which a mixed dietary of butcher's meat, liver, lungs, bread, sour crout, boiled potatoes, and cranberry-jelly was given. In all the experiments, the subjects received, in addition, tea, sugar, chloride of sodium, and water. The chief results obtained may be given thus:—(i) When consumed alone, lungs are assimilated at the rate of 85·7 to 86 per cent. of the quantity ingested; liver, at that of from 89·8 to 90·7 per cent.; but butcher's meat, from 90 to 97 per cent. (ii) When they are given with other food-articles, the assimilation of lungs varies between 80 and 86 per cent.; that of liver, between 83·3 and 91·9; and that of meat, between 86·3 and 93·7. (iii) In other words, the assimilation of lungs and liver is inferior to that of meat. The assimilation of liver, however, is better than that of lungs, coming nearer to that of meat. (iv) Still, in a minced form, lungs may be used as an ingredient of various dietetic compounds. As to liver, it may be decidedly recognised as a valuable food-article even when used alone.

Valerius Idelson, M.D.

Surgery.

RECENT PAPERS.

680. **Bond, Mr.**—On The Treatment of Enlarged Bursæ and Ganglia by Excision. (*The Practitioner*, June, 1890, p. 440.)

681. **Schmeltz, Dr.**—On the Excision of the Mamma performed during Hypnotic Anæsthesia. (*Gazette Médicale de Strasbourg*, July 1, 1890.)

682. **Rubio, Dr. F.**—On Trephining with Reparation of Osseous Tissue. (*Revista de Medicina y Cirurgia Praticas*, July 7, 1890.)

683. **Lannelouque, M.** — On Craniectomy in Microcephalus. (*Médicine Moderne*, July 5, 1890.)

684. **Pereira, M.**—On a Case of Hepatic Abscess in a Female Child. (*Indian Med. Gaz.*, June, 1890.)

685. **Wright, Dr.**—On a Case of Epithelioma of the Ear following Frostbite. (*The Canadian Practitioner*, July 1, 1890.)

686. **Huntington, Dr. T. W.**—On a Case of Extirpation of the Thyroid Gland. (*Occidental Med. Times*, July, 1890.)

687. **Wilson, Dr. Cunningham.**—On a Case of Ligature of the Subclavian Artery. (*Med. News*, June 21, 1890).

Art. 680. *Bond on the Treatment of Enlarged Bursæ and Ganglia.*—Mr. Bond states, in the June number of the *Practitioner*, that he is strongly in favour of the treatment of enlarged bursæ in the neighbourhood of large joints by the radical method of excision of the whole or a large part of the cyst-wall. In dealing with these swellings in the popliteal space, the incision must be made well down to the cyst-wall before beginning any dissection; if this be done, and the cyst well defined while tense and before it is opened, it can be isolated without difficulty. It is then best to lay it open, and ascertain from within what extensions and communications it has; these must be dealt with, and then as much of the cyst-wall removed as possible. In dressing the wound, pressure should be applied with wool-dressing, and the limb bandaged in a semi-flexed position, so that the skin and soft parts fall together, and a tightly-stretched scar is avoided. The same method may be extended to the enlarged bursæ over the olecranon and patella. The treatment of the swellings in the sheaths of the tendons in relation to the wrist-joint is next discussed. Those simple ganglia which are too large to rupture, are best treated by excision; an incision is made over the swelling, which is isolated as far as possible, it is then laid open and its prolongations defined; as much of the cyst-wall as can be isolated is then cut away, and the posterior portion lying over the wrist-joint is left. As a rule, the wound heals by first intention without any adhesion of the tendons. In cases of compound ganglia, the operation is sometimes very complicated, the tendons being studded over with a velvety membrane and vascular fringes, like the lining membrane of the cyst-walls. In these cases the tendons must be picked up separately and systematically cleaned one by one; when this is done, the wound should be stitched up, and as a rule good movement is obtained in a short time.

RICHARD NEALE, M.D.

681. *Schmeltz on the Excision of the Mamma performed during Hypnotic Anæsthesia.*—I. M., twenty years of age, unmarried, consulted Dr. Schmeltz of Nice, about a growth in her right breast, which she had observed since April, 1890. While examining the growth, which appeared to be a large sarcomatous tumour, Dr. S. remarked that this young woman could be easily plunged into the hypnotic state. He sent her asleep in a few seconds by looking fixedly at her, and making some downward passes. The catalepsy and anæsthesia seemed complete at the same moment. He proposed complete extirpation of the mamma, as the neighbouring glands were not affected and her general health was good. The young woman agreed that the operation should be performed under anæsthesia produced by hypnotism. Several preliminary experiments were made to see if she could be brought into a state of insensibility. It was found that pins could be driven into different parts of her body without giving her any pain. On the day fixed for the operation it was found impossible to obtain complete anæsthesia, as Miss M. had been told that it was the day of the operation. It was not till after the departure of the assistants that she could be hypnotised, when the conviction was implanted in her mind by suggestion that the operation would be put off for eight days. She was hypnotised, however, next day, when everything went on right. When the operation was completed, Doctors Lauza and Barrier assisted the operator. They wished him to have chloroform or ether ready in case of failure, but this Dr. Schmeltz would not do. "I operated very slowly," says Dr. Schmeltz, "and quite at my ease. The patient even sought to encourage me by her words. She appeared very gay and laughed several times as if to show decidedly that she felt no pain, and, to make the operation easier, she turned herself in a more favourable position, holding her right arm extended without any assistance being necessary to fix it. I kept her all night to observe her, after having made the suggestion to her not to suffer, and to have an excellent night." This was realised. The patient did well, the incisions healing on the fifteenth day. The tumour was found to be of a malignant character. Dr. Schmeltz remarks that it is important not to tell the patient the day of the operation, otherwise fear and anxiety will prevent him being hypnotised. He observes that during the operation the pulse did not vary, though the patient looked pale. Every one cannot be mesmerised; and generally it is expedient to make a number of hypnotic rehearsals leading up to the operation. When the patient is made to close the eyes, one can generally obtain anæsthesia. Magnetic insensibility is superior to that produced by ether and chloroform, the administration of which cannot be kept up for a long time, whilst hypnotic anæsthesia lasts as long as the operator desires. Dr. Schmeltz thus describes his method of procedure:—"The rotative mirrors of Luys, which I have several times tried, and of which that author thinks so much, seem to me weak in comparison to the old method of looking in the patient's eyes, combined with descending passes. This natural method forces the subject instinctively to lower the eyelids for a time, varying from some seconds to some minutes. If sleep be not obtained quickly by this manner, I hasten things by shutting with my fingers the eyelids of my subjects, compressing at the same time the eyeballs. At this moment I suggest to them that I am going to re-open their eyes, fix them firmly, and then the eyelids will fall of themselves. If even after this the experiment fail, I go on until I succeed, or I send away the patient to recommence the next day. The shutting of the eyelids once obtained, it is easy in the great majority of cases to obtain a perfect general anæsthesia, as much superficial as very profound, and as complete in all cases as with ether or chloroform."

682. *Rubio on Trephining with Reparation of Osseous Tissue.*—Dr. Federigo Rubio presented to the Royal Academy of Medicine at Madrid a patient, of whom he gave the following account:—The man was forty-eight years of age, of middle stature and vigorous constitution. On July 26th, 1889, he was struck on the forehead by a small quoit hurled at him with the full force of a man's arm, and at a distance of two or three paces. The quoit was four centimètres in diameter of the ring, about half as much in thickness, and weighed 880 grammes. He fell down insensible; but consciousness returned in six or eight minutes. There was a copious hæmorrhage, and a feeling of stupefaction. He walked with some assistance to a neighbouring dispensary (Casa de Socorro), whence, after several hours, he went on foot to his own house. Three days afterwards, he entered the Provincial Hospital, where he remained till the 8th of November. He afterwards applied for relief to the Hospital de la Princesa. On being here examined, the man was found to have a considerable cicatrix of about two centimètres in diameter, of a circular form, occupying the upper portion of the frontal eminence, a little to the right of the middle line. On examining it attentively, it was made out to be a depressed fracture of the frontal bone. There was no paralysis; but during the last three months the man's character had changed. Formerly active, he was now morose and apathetic; the facial expression was stupid and the pronunciation slow. He had loss of consciousness, which lasted for a few seconds, recurring three or four times a day. There was also occasionally noted a slight involuntary trembling of the left leg, which looked like the beginning of a Jacksonian epilepsy. It was determined to apply the trephine to the cranium on the site of injury, which was done on February 11th, 1890. The operation was performed with antiseptic precautions. Dr. Rubio removed a loose piece of bone found lying upon the first frontal gyrus, and which pressed down the membranes and the brain-tissue. In similar operations Dr. MacEwen preserved the disc of bone removed by the trephine between warm sponges perfectly aseptic. This he afterwards divided into small pieces, which he placed between the dura mater and the skin. In the present case this could not be done, owing to the injured condition of the bone. Dr. Rubio therefore preferred the proceeding of Dr. Seen, of Chicago. This consisted in the use of portions of decalcified bone taken from the tibia of a cow. The

bone was macerated in a solution of hydro-chloric acid of five to the 100, which was renewed till the calcareous matter of the osseous tissue was entirely removed. Pieces of this prepared substance of some millimètres in thickness were treated during forty-eight hours in a solution of potash or soda of two per cent. Finally they were kept in a solution of one of corrosive sublimate to 500 of alcohol, until they were used to fill up the cavity, at which moment they were dipped in a solution of carbolic acid of five to 100 of water. Dr. Seen found, by experiments made on nine dogs, that by engrafting these prepared substances he, in some cases, succeeded in much diminishing the trephined cavity, in others in completely making up for the loss of substance by a new formation of bone. Dr. Rubio determined to take advantage of these experiments of Dr. Seen, for the first time in an operation on the human body. He therefore distributed pieces of decalcified bone in a regular manner in the cavity formed by the trephine. The day after the operation, the expression of the patient had notably changed; his look was more lively, and he had lost in great part the stupid aspect which he previously presented. His speech was much quicker. The involuntary tremors of the left leg and the fits of epileptic vertigo disappeared. Seventeen days after the operation the parts had cicatrised, and there was even a partial consolidation of the engrafted pieces of bony tissue. Hard points had formed here and there, and it was hoped that in time the restoration of bone would be complete. Dr. San Martin, after congratulating Dr. Rubio on his surgical triumph, observed that he had seen a patient who had an intra-cranial tumour at the lambdoid suture. On pressing it, there followed disturbance and then total loss of vision. In this case there was congestion of the retina. He also mentioned a tumour in the parietal region, which was removed by sub-cutaneous galvanic section. After this various contractures of the upper and lower extremities disappeared.

William W. Ireland, M.D.

683. *Lannelouque on Craniectomy in Microcephalus.*—M. Verneuil brought before the French Academy of Sciences a patient, in the person of a girl, four years of age, who had been operated upon by M. Lannelouque. The child was the subject of marked cranial deformity with serious microcephalus. She was born at term, and belonged to a healthy family, but had been "behind hand" throughout, taking only liquid food until over three years of age, and being still unable to walk, stand, or talk. In short, she presented the appearance of an under-developed child of two. The head was small, deformed, and narrowed transversely, arched at the vertex. The occipito-frontal diameter was the only one that was about normal, the others being markedly below the average. It was, in fact, a typical case of microcephalus with idiocy. He recalled the various theories bearing on the deformity. (i) Virchow, who considers the microcephalus to be due to premature ossification of the sutures compressing the brain; (ii) Vogt, Baillayer, &c., who believe that the brain is normal, but of reduced size; and (iii) Bourneville, Hill, and Hutchinson, who regard the brain as the seat of pathological changes of fœtal origin, in addition to changes in the cranium. The author had remarked, in an autopsy made by himself on a similar case, that changes in the cerebrum coincided with irregular cranial hyperostosis and closely united sutures. It occurred to him that it might be possible to give the brain a chance of developing by diminishing the mechanical pressure exercised by the bony envelope. He therefore made an incision from before backwards, a finger's breadth from the sagittal suture, extending from the frontal to the occipital suture, not involving the dura mater and involving a loss of substance nine centimètres long by six in breadth. The edges of the superficial wound were brought together without drainage, and healed by first intention. This was done on May 9, and by June 15 the following effects were noted:—The child had become calm, and the restlessness and tendency to cry out had disappeared; she appeared to take an interest in what was going on around her, could stand, and even walk to some extent, and no longer dribbled. M. Verneuil pointed out that resection of the cranium was a rational proceeding based on anatomical and pathological data. The operation, moreover, was relatively innocuous in children, and though its therapeutical effects were still uncertain, its success from a surgical point of view was indisputable.

Alfred S. Gubb.

684. *Pereira on a Case of Hepatic Abscess in a Female Child.*—On the 29th Dec. last, the female child, aged 20 months, of a coffee-planter, was first treated, with the following history:—She had always been well and strong till the latter end of November, when she passed a few slightly dysenteric motions, which were readily corrected by a small dose of castor-oil and laudanum. On December 2nd the stools appeared clayey and deficient in bile; and as the patient was losing flesh and looking ill she was brought into Ootacamund. On the 5th she was seen by the medical officer attached to St. Bartholomew's Hospital, who treated her for congestion of the liver. At the end of nine days, finding that all liver symptoms had disappeared, and the patient was gaining strength and flesh, he allowed her to be taken back to her father's estate. Soon, however, after her return home, the child began to look ill again, and to complain of pain in her abdomen. Her mother then noticed a bulging in her right side, and an apothecary employed on some neighbouring estates was called in who, after treating the child for some days for hepatitis, advised her being brought into Ootacamund for further treatment, "as an abscess had formed on the liver." When the patient was seen on December 29th, she was emaciated, weak, and evidently in great pain, with pinched and anxious face; waxy, but not jaundiced, skin; appetite bad, tongue furred, light brown; temperature 102° F.; respiration short and quickened. There was a fairly well-defined swelling in the hepatic region about the size of the fist and distinctly fluctuating. It was most prominent at the tenth intercostal space, where it was evidently pointing. As the author had no doubt as to the nature of the case, he tapped the abscess with an ordinary trocar and canula about the size of No. 5 catheter, letting out about twelve ounces of thick blood-stained odourless pus mixed with blood-clots. Absorbent cotton wool and a firm flannel roller were applied. The patient did well for a time, but the abscess cavity refilled, and it was found necessary to syringe out the cavity with warm boracic acid solution. This had the desired effect, and with the assistance of firm pressure, cicatrisation was obtained, and the little patient was discharged cured by the middle of February.

685. *Wright on a Case of Epithelioma of the Ear following Frostbite.*—The patient was a strong, healthy man, aged fifty-five, whose ears were both badly frozen twenty-eight years previously, and had remained thickened and swollen ever since. Eight years ago a little depression appeared at the upper and posterior

portion of the tip of the right ear; this was of the colour of a mole, but was rough like a wart. The ear remained in this condition for four years, at the end of which time it looked like a small wart with little round "seeds" in it. Three years ago removal of the growth was advised, but it was allowed to remain until November, 1888, when the diseased portion of the pinna was cut out. The wound healed well. It began to re-appear in August, 1889, and, three months after, discharge began to come away from it. A caustic paste was applied for four months, but the condition became worse under treatment. The disease having extended considerably, the patient decided to come to the hospital for operation. On admission, the right pinna presented a peculiar appearance; it was purple in colour, as if engorged with venous blood, the tissues were thickened very considerably, and felt like a piece of leather, when grasped between the finger and thumb. The thickening of the tissues was very much greater at the base of the notch than elsewhere in the pinna. There were no glandular indications detected. Amputation of the pinna was performed on June 19th, a vertical incision being carried through healthy integument at the bottom of the concha, one-quarter inch behind the external auditory meatus; this was carried vertically upwards over the helix, and down on the inner aspect of the ear, close to the bottom of the sulcus, between the pinna and the scalp. The incision was then continued through the posterior portion of the lobule until the starting-point was again reached. The integument was now dissected up towards the meatus anteriorly, and towards the scalp posteriorly, and the cartilaginous portion of the pinna was then completely cut through, and the amputation thus completed. The greater part of the lobule was left, and the tragus, these portions being quite unaffected by the disease. The flaps were now brought together accurately by interrupted suture and an antiseptic dressing applied. Bleeding was remarkably profuse during the operation; the cut vessels were, however, readily secured, and either twisted or ligated. The wound healed readily by first intention.

686. *Huntington on a Case of Extirpation of the Thyroid Gland.*—J. S. W——, aged forty-two years, a clerk, entered the Southern Pacific Company's Hospital, September 17, 1888. About eight months ago he had noticed a small tumour situated in the neck, close to the right border of the trachea. This gradually increased in size, and two months ago began to cause inconvenience through pressure upon adjacent organs. On admission, he complained of considerable difficulty in swallowing, and at times the mass obstructed the respiratory act. The author accordingly at once determined upon removal of the tumour. Ether having been administered, assisted by Drs. Cluness and Gardner, he made an incision two and a-half inches long over the right border of the trachea. Through this the tumour was readily exposed. At the same time it was discovered that both lobes of the thyroid were considerably hypertrophied. Although the tumour was attached to the right lobe of the gland by a rather large pedicle, it was apparent that the connection was very intimate. In view of the hypertrophy of the gland, he concluded to remove it with the tumour. This was done by extra-capsular enucleation. The right and left superior and left inferior thyroid arteries were tied twice in their continuity, and then divided. The same course was pursued in dealing with other important vessels, both venous and arterial. In this he was greatly aided by the use of a pair of curved transfixion forceps. The blunt points of this instrument having been passed around a mass of vascular tissue, were opened and made to grasp a double ligature. By this means the entire gland was separated with a minimum of hæmorrhage. The resulting cavity was provided with drainage tubes, carefully irrigated, closed with wire sutures, and dressed antiseptically. The ligatures, which were of strong hemp-twine, came away in from five to ten days, and the wound healed without interruption. For the first few days some difficulty was experienced in breathing and swallowing, but these symptoms disappeared without untoward consequences. At the end of four months from the operation the patient seemed to present symptoms of incipient myxœdema. His face was puffy, his limbs œdematous to a marked extent, and his skin waxy and pale. Mental depression and inability to concentrate his mind upon his ordinary work was also noted. He complained of great weariness and lassitude, with neuralgic and muscular pains. These symptoms persisted for several months and then under tonic treatment gradually subsided. The patient has been seen very often during the past year, and continues to be able to pursue his calling as an accountant, though his health is naturally poor.

687. *Wilson on a Case of Ligature of the Subclavian Artery.*—A coloured man, aged twenty-two, had been stabbed in a brawl, six weeks before admission to the Jefferson County Almshouse, one wound entering opposite the acromion process on the left side, giving rise to aneurism. The bleeding was at first profuse, but ultimately stopped spontaneously, when he noticed a small tumour at the seat of the injury, burning pain along the inner side of the arm and forearm. The swelling and pain increased, until, on admission, there was a large tumour the size of a large orange in front of the shoulder-joint, and the pain was so severe that the patient carried his arm supported at right angles to the body by the other hand. The tumour was easily diagnosed as an axillary aneurism. The subclavian artery was ligated in its third portion with strong cutgut, April 8, 1890. Pulsation immediately ceased in the tumour as well as in the radial artery. The arm was wrapped in cotton, and hot-water bags were constantly applied. The patient immediately began to improve, and he complained very little of the former pain in the arm. Feeble and irregular pulsation was detected in the radial artery on the third day after the operation. The tumour slowly became smaller, and when he was dismissed, May 6, 1890, had almost entirely subsided. The radial pulse at this time had been re-established, but was not so full as in the other forearm. The patient was able to resume his occupation as a labourer.

Medicine.

RECENT PAPERS.

688. Shaw, Mr.—On Aprosexia in Children. (*The Practitioner*, July, 1890, p. 8.)

689. Finlayson, Dr. James.—On Obscure Febrile Attacks in Chorea. (*Arch. of Pædiatrics*, July, 1890.)

690. Einhorn, Dr. Max.—On a New Method of Obtaining Small Quantities of Stomach Contents for Diagnostic Purposes. (*New York Medical Record*, July 19, 1890.)

691. Edwards, William A.—On Cirrhosis of the Liver in Childhood. (*Arch. of Pediatrics*, July, 1890.)

692. Mey, Prof. V. D.—On the Diminution and Disappearance of Tumours. (*Nederlandsch. Lydsch. r. Verloskunde und Gynækol.*, Jahr. 1., Heft. 1.)

693. Geppert, Herr.—On Disinfecting Means and Methods. (*Berliner Klin. Wochenschr.*, 1890, No. 11, ff.)

694. Colin, Dr.—On a Mad Family. (*Annales Méd. Psychol.*, July and August, 1890.)

695. Gretchankoff, Dr. Vladimir.—On the Statistics of Helminthiasis. (*St. Petersburg Inaug. Dissertation*, 1890, No. 60, p.p. 38.)

696. Baranowski, Dr. Bronislaw F.—A Contribution to the Study of the Frequency of Intestinal Worms amongst the Population of Moscow. (*St. Petersburg Inaug. Dissertation*, 1889, No. 40, pp. 56).

697. Thistle and Caven, Drs.—On a Case of Intra-cranial Tumour. (*Canadian Practitioner*, June 16, 1890.)

698. De Saussure, Dr.—On Twenty-two Cases of Filaria Sanguinis Hominis. (*Med. News*, June 28, 1890.)

Art. 688. *Shaw on Aprosexia in Children.*—Mr. Shaw, M.B., writes that, in the aural out-patient practice of several large hospitals, he has made enquiries from the mothers who have brought children to be treated for deafness, as to the mental acuteness of these children, and he was struck by the frequency of the statement that with the onset of deafness, the children became much duller mentally, and showed a marked change in their capacity for school-work. On further investigation, the author found that when this dullness had been noticed, there was invariably present an overgrowth of adenoid tissue of the pharyngeal tonsil, and in the immediate neighbourhood of the orifice of the eustachian tube. On removing this growth, or even on scarification, the deafness was relieved, and at the same time an improvement was noticed in the mental capacity of the child. In 1887, Professor Guye, of Amsterdam, drew attention to this particular class of cases, and revived the use of the word "aprosexia," which is the Greek for "heedlessness." Professor Guye attributed the mental condition in these cases to be due to a supposed congestion of the intra-cranial venous and lymphatic systems, caused by the enlargement of the lymphatic glands in the neighbourhood of the pharynx and nose, which are in connection with the lymphatics of the anterior lobes of the brain. Ferrier has shown that in the monkey, extirpation of the pre-frontal lobes of the brain has been followed by a marked impairment of the faculties of attention and observation. Co-existent with the hypertrophy of lymphoid tissue, which produces the "adenoid vegetation," there is found an increase of the more purely fibrous connective-tissue element in the neighbourhood; this has a tendency to contract, and so causes compression of the lymphatics, and obstructs the flow of lymph, so that the waste-tissue products, derived from the metabolism going on in the cortex of the fore-brain, is prevented from making its escape, and remains in the cerebral cortex, interfering with and hindering its proper nutrition; the resulting mal-nutrition giving rise to the condition which is termed "aprosexia." Richard Neale, M.D.

689. *Finlayson on Obscure Febrile Attacks in Chorea.*—Some twenty years ago, Dr. Finlayson remarked on the occasional occurrence of short febrile attacks in the course of chorea. In 1884, a case occurred in the Glasgow Western Infirmary which suggested endocarditis as an explanation. Very possibly others have recognized these attacks as due to this cause; but the cardiac symptoms are often so slight that the cardiac origin is apt to be overlooked. The case was that of a girl, seven years old, admitted with chorea of seven weeks' duration. She had, on admission, a systolic murmur at the apex. There was no rheumatic history in the child, but a paternal aunt had had rheumatism. About a fortnight after admission, the child had a febrile attack, lasting about seven days, during three days of which temperature was at, or near, 103° F. No rheumatic complications occurred, and nothing, on physical examination of the chest, could be made out beyond the murmur present on admission. Some weeks afterwards, the temperature rose again and the idea of endocarditis was forced on Dr. Finlayson's attention, not only by the quick pulse, 120 to 130, but by the rapid respiration, 60 to 80 per minute, without pulmonary complication. The febrile attack lasted five days, the temperature ranging from 100·4 to 105° F., and the child died. At the *post-mortem* examination it was noted that the left ventricle was somewhat enlarged and dilated. The auricular margin of the mitral curtain was lined with a scanty deposit of recent warty vegetations. The same condition, but less marked, was found along the margins of the tricuspid curtains. In view of the *post-mortem* examination it seems clear that not only was the terminal attack due to endocarditis, but the previous attack also. If the cardiac murmur in this case had developed, or become notably altered during or after the febrile attack, everyone would have thought of endocarditis. We know, however, that endocarditis may develop even as a fatal disease without any murmur at all, and that it may occur in cases complicated with old valvular murmurs, without any new feature being added to the murmur. Dr. Finlayson quotes two other cases illustrative of his view. He holds very strongly the close relationship between chorea and rheumatism. From a practical point of view, the importance of the subject turns on the advisability of treatment by rest, when such febrile attacks occur. The child should be kept in bed during the pyrexial period, and, even after the pyrexia subsides, should be kept at rest for some days, as thereby the injurious effects of the endocarditis in the valves may be minimised.

690. *Einhorn on a New Method of Obtaining Small Quantities of Stomach Contents for Diagnostic Purposes.*—The chief progress in the study of diseases of the stomach lies especially in the field of the chemical condition of that organ. The determination of free hydrochloric acid plays a main *rôle*, for it forms one of the most important products of the stomach-secretion. As is well known, the stomach-contents are obtained by means of a tube and by Ewald's "expression method." There are certain pretty obvious objections to both these plans. Any method which makes less difficult the examination of the stomach-contents should be welcome to the practitioner. It is certainly better to have something objective, than to be merely dependent upon the subjective complaints of the patient. Guzenburg, in 1889, tried to avoid the tube by making his patient swallow potassium iodide fastened in rubber bags by fibrine threads. The drug was set free by digestion of the fibrine, and was tested for in the saliva. Another method was that of Edinger, in 1881, who made the patient swallow a sponge tied to a silk thread. The chief fallacies of

the latter plan are, that the sponge is squeezed at the cardiac orifice, and also absorbs secretions of œsophagus, &c. To meet these objections the author has devised a "stomach-bucket," shaped like a small acorn, and opening at one end. Over the opening is an arch, to which a silk thread is tied. In order to introduce the little vessel, it is placed at the root of the tongue and the patient directed to swallow, when it reaches the stomach in from half to one and a half minutes. A knot in the string, forty centimètres from the bucket, is convenient. If the stomach be not empty, a sufficient quantity of its contents can now be withdrawn to make qualitative tests for free hydrochloric acid and the rennet ferment. In this way the danger and inconvenience of the tube are avoided. The best time for obtaining a sample is, three to four hours after a trial dinner. Sometimes the vessel gets filled with mucus before entering the stomach, in which case it should be closed with a thin gelatine cover before reintroduction. Other points incidentally shown are (i) permeability of œsophagus; (ii) determination of closure of cardia; (iii) strength of stomach contractions, indicated by the traction on the thread.

691. *Edwards on Cirrhosis of the Liver in Childhood.*—Hepatic cirrhosis is rare in childhood. Gerhardt remarks that, if we exclude syphilitic cases, but few examples are met with to prove the existence of the disease. Other authors bear testimony to its rarity. In the present paper Edwards relates particulars of a case under his care, and discusses the pathology and etiology of the disease. He appends to his paper an analysis of one hundred cases, which have been published by various observers. His own case was that of a boy aged ten. He was healthy at birth and for the first twelve months. Began to grow thin and puny after weaning. Had congestion of the lungs at eighteen months old, and scarlet-fever at two years. From the age of two, he had chronic nettle-rash, and sudden swellings would come up on his forehead almost the size of an egg, quite deforming his appearance. These sudden swellings were confined to the head; the nettle-rash was all over the body. At four years old he had whooping-cough. Every winter he had had a bad cough. He had always appeared swollen from the ensiform cartilage to the umbilicus, but this seemed to have increased lately. For three months previous to coming under observation, he had been slightly jaundiced, and had suffered from epistaxis several times a week. The bowels had been alternately relaxed and constipated. When first examined, the liver was greatly enlarged, extended nine mètres (*sic!*) below the costal arch in the nipple line; its left lobe encroached beneath the left costo-xiphoid angle; it was smooth and firm on palpation, and slightly tender over the right lobe. The urine was normal. The spleen was slightly enlarged. No evidence could be obtained of syphilis, and the child had never used alcohol. The case has been under observation for twelve months. During that period the temperature has fluctuated between normal or sub-normal, and 100°. The liver has increased slowly in size. Examination of the blood revealed nothing special. No malarial organisms were at any time observed. The case remains under observation. As to the etiology of hepatic cirrhosis in childhood, Edwards remarks that alcohol must be entertained as a possible cause, although it occupies a very minor position as a causative agent in the young. In the table of a hundred cases appended to the paper, its habitual use is only mentioned eleven times, its absence being noted fifty times, and no mention being made of it in thirty-three instances. The infectious fevers seem to play a more important *rôle* in the etiology of the disease in childhood. Some cases of cirrhosis of the liver appear to be a part of a general fibroid change, a rare condition in childhood. Tuberculosis may cause hepatic cirrhosis. In some cases the pathological change seems to be set on foot by a faulty digestion, possibly developing a poisonous alkaloid through abnormal chylo-poietic metabolism. Regarding the form of the disease as it occurs in childhood, it may be either the atrophic or the hypertrophic varieties; not unusually the so-called mixed cirrhosis is met with. The symptomology differs but little from the adult

692. *Mey on the Diminution and Disappearance of Tumours.*—A woman, aged forty-two, married four years; no births nor abortions. Had complained for seven weeks of almost persistent hæmorrhage, with short intervals of a couple of days. The catamenia were previously always regular, but scanty, since the age of thirteen. On palpation, a smooth, non-fluctuating tumour was found, reaching to the navel. It was also to be felt through the anterior vaginal roof. On pressing it between the two hands, a slight movement of fluid was noticed. On test-puncture, a colourless, slightly turbid fluid escaped, of weak alkaline reaction and sp. gr. 1006. Serum-albumen and metalbumen were present. It was, therefore, either an ovarian or an echinococcus cyst. A week after the puncture, the tumour had much diminished—only 60 cubic centimètres had escaped (about two ounces), and could, in fact, no longer be felt except by combined examination (external and vaginal). A week afterwards it had completely disappeared, and the uterus had returned to its normal position. The patient had no pain, either before or after puncture. Nor was there diuresis or diaphoresis, no increased vaginal secretion. But it was remarkable that for a few days after puncture the temperature rose to 38·2° C., once to 38·8° C. (100·7° and 101·8° F.). Professor V. D. Mey is of opinion that the disappearance of the tumour is only to be explained by assuming that the needle-opening in it did not close, and that its contents were gradually emptied into the abdominal cavity, where they were absorbed. This would account for the rise of temperature. In the year 1880 Dr. Berus reported a case of tumour (ovarian), which in the course of a year and a half diminished in size from a child's head to an egg.

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693. *Geppert on Disinfecting Means and Methods.*—The following abstract is from the *Centralblatt für die Med. Wissench.* (No. 30, 1890):—In an earlier paper, Herr Geppert had stated that "*sublimate*" has not the disinfecting action usually ascribed to it (*Centralb. f. d. med. W.*, No. 9, 1890). In pursuance of his investigations, Geppert shows that its strong antiseptic action in earlier experiments lay in the substratum (holding the spores) which served as indicator, viz., threads or cotton-wool fibres. A kind of chemical combination occurs, so that the most careful washing with water, as generally practised, cannot remove the perchloride of mercury; hence the growth of the spores is prevented on nutrient media, and a true disinfection is simulated. When, instead of threads, steel needles or covering glasses were used, and touched with anthrax spores, the latter developed into a "culture," even after twenty minutes' immersion in a one per thousand sublimate solution, and

inoculated animals died of splenic fever. In fact, in the use of sublimate, the impression falls on the object and not on the infection-carrier. The more such an object, loaded with sublimate, is in a condition to retain it, the less can it disinfect. Also the concentrated (7 per cent.) watery solution of *carbolic acid* was examined similarly, and after thirty-eight days' stay in it, anthrax bacilli were still capable of growth and of infecting animals. *Boiling water* was next examined. After one minute in this, spores were still able to develop and infect; after two minutes' boiling, spores could no longer infect animals, but could still develop on agar; it required five minutes' boiling to prevent subsequent growth. The result, repeatedly verified by the author, that growth upon nutrient media and the capability of infecting animals are not lost *pari passu*, induced him to take as his criterion of perfect infection the loss of action on animals. In the case of boiling water, the spores could grow after they were found to be harmless on animals, but in the case of sublimate the opposite occurred. Pieces of skin into which anthrax spores were rubbed, and which were dipped for five minutes in sublimate solution, showed no growth of the spores on agar, but inoculated rabbits and mice died of splenic fever. The strongest antiseptic was found to be the oldest we know of, viz., *chlorine*. A watery solution holding 0·2 per cent. of chlorine destroyed, in fifteen seconds, the infectiveness and power of growth of anthrax bacilli; at the moment of contact it so attenuates the spores that they are no longer able to kill rabbits, which are evidently not immune against splenic fever. On the other hand, the power of chlorine to prevent development is only slight; it requires a strength of one in 700, at least, to stop the development of anthrax spores on agar. In the nascent condition, chlorine is still stronger than aq. chlori. If to a weak mixture of chloride of lime and water, containing anthrax spores, HCl (three per cent.) was added to the latter, and then immediately weak NH_3, inoculated animals did not die, but if water was used *vice* HCl they died of splenic fever. Since in the former method of using chlorine the suffocating smell of chlorine is absent, the author selected this way of using chlorine as the best in medical practice. Moreover, by this method the previous use of soap and water is unnecessary, because the mixture is eminently cleansing and removes dirty layers of organic material. To cleanse the hands then, a paste is used of 100 parts of powdered chloride of lime with 45 of water; this is like an ointment. It is rubbed well over the hands, which are then dipped in a two or four per cent. solution of HCl; finally, the nails are gently brushed. If certainty of disinfection is desired, the hands may be previously dipped in gentian-violet solution; if the chlorine acts sufficiently, the colour will be entirely discharged. Instead of the paste the hands may be dipped alternately in chloride of lime solution and HCl three per cent. The author thinks it very important that in experiments where an infection-carrier is removed from a liquid, we should be able to cleanse it effectually from that liquid. This is not the case with threads; hence a source of error.

694. *Colin on a Mad Family.*—The following is a most instructive example of communicated madness, the *folie à deux*, or *folie communiquée*, of MM. Falret and Lasejue. The family consists of the father, mother, and four daughters; the eldest, aged twenty-three, is now in the asylum of St. Anne; another, aged fifteen, is at home with her parents; the two others, aged eighteen and nine, were in the country, and have not been examined. But these two, when they came to Paris, did not hesitate to adopt their mother's ideas. The girl in the asylum would have been considered a few years ago a good example of hysterical delirium; but it is not so, nor even a delirium of persecution in a feeble subject. The mother, still at large, is the source and cause of all. Let us take the girl first. She applied to a police-commissary to pour her hundred suspicions into his ear to demand an enquiry. Her parents wished to get rid of her, to poison her; people looked at her fiercely, said that she was *enceinte;* her mother tried to make everyone believe so, &c., &c. The commissary consigned her to the Depôt Infirmary for medical examination. She screamed much on being removed to the women's quarter, where she had to be carried by force. She talked utterly at random to the doctor, but when questioned about the past answered very well and exactly. She had been healthy in childhood, and was away in school from seven to fourteen years. At her return thence she continually saw her mother making "scenes" and weeping. By-and-by, the latter confessed to her that the father wished to poison her (the mother). Gradually the daughter believed this, and pondered over it day and night, under the continual suggestion of the mother, and began to interpret wrongly everything that occurred. When seventeen years old, she obtained her *brevet simple*, and at twenty her *brevet superieur* as a teacher. She had previously worked much at her needle. She then came to England, but was soon hypochondriacal, and returned home. The old life recommenced, her mother embittered her against her father day and night, and she now thought he wanted to poison her as well as her mother. She felt bodily ill now, with gastric symptoms, insomnia, giddiness, and great debility. She went to her grandparents in the country, and now began to think everyone persecuted her. She easily found facts to support her own ideas, and even ranked her mother amongst the rest. In fact, she was now mad on her own account, independently of the mother. She had hallucinations in the asylum, thought there was a fire, and threw her boot through the window; thought she was taken for Gabrielle Bompard, and would be forced to see the assassination of Gouffé. The idea of the fire was very vivid, for she declared she heard the fire-machines at work, and smelt escaping gas, and screamed "Fire!" There was no luminæsthesia, no sensorial stigmata, no retraction of visual field, and she had never lost consciousness. Thus she had none of the usual signs of hysteria proper (*la grande hysterie*). The mother, who was an "enfant naturelle," had begun to show suspicions two years after marriage, twenty-five years ago, when she was twenty years old. She had no hysterical attacks, nor melancholy, but she had the idea that she would die at the age of twenty-four, and was much affected about it. These details her husband gave. She began with the idea of his wishing to poison her during the siege of Paris, and became also extremely jealous about him. At the present time, when questioned, she does not hesitate to pour out her reproaches. She says he is a wicked man, a criminal, and wishes he would die that she might have peace. She declares that she could never keep any nurses in the house on account of her husband. The idea of poisoning has lasted twenty years; no one had any idea of the number of times her husband tried to poison her, and the various shifts he resorted to. Latterly, she had slept with her daughters "to pro-

tect them," and stopped up the chinks of the door with rags and paper to prevent poisonous gases from being driven in. Then they kept bread and wine apart that her husband might not poison them all. The mother complacently said that the daughter, aged fifteen, was not a fool, but was beginning to take precautions too. This girl had only joined them recently. The other girl, aged eighteen, had not these ideas when she came to Paris from the country, but within a month began to adopt them, and believed her mother entirely. The mother said that the father was mad, and that she and her girls kept it secret from everyone. The girl, aged fifteen, was visited at their home by Dr. Colin, and chattered away with the greatest volubility about the various suspicious little occurrences that made her certain her father wished to poison them. Once she sneezed on opening a book —that was very strange. They might put things in books. There was a Spanish book that made her and her sister quite ill when they opened it. She found a brown spot on something, and made her mother dissolve it in water. "There are violent poisons, you know, but what can one do without proofs?" During all these twenty years the mother made a confidant of the family doctor, but, strange to say, he never took any steps to get her incarcerated, as he ought to have done. She influenced her four daughters; in fact, made them all mad, "and the house a hell," under his eyes and the eyes of her weak-minded husband, without any attempt to prevent her, and she is still at large. Lastly, for the father, aged fifty-eight. He is a tranquil man, with a gentle expression, an insignificant man, a jeweller by trade, and fairly well off. What must we think of such a man, who bore all these insanities for twenty years without murmuring, even when he saw his children flee in terror from him? Must he not be a feeble-minded man? There is no doubt that he is, and his family history reveals at least three insane individuals, viz., a maternal uncle, who died in an asylum of "cerebral tumours"—he had violent fits; the son of this uncle, who died in an asylum; another son, aged twenty, who shuns everyone, having the idea for several years that he is offensive, and that people in the street avoid him. The explanation of the slowly unfolding drama is complete. There is a feeble-minded father, who has permitted all this; the mother, the *active* cause of all; and the children, the *passive* elements, who have lately become insane more independently, after being for some years merely echoes of the mother. Not one of the friends and neighbours suspected the condition of things. But many a house could present a similar picture. Dr. Colin ends by saying that the only excuse for the medical attendant of the family in this case is the ignorance, often voluntary amongst practitioners, of everything relating to mental medicine.

E. J. Edwardes, M.D.

695. *Gretchaninoff on the Statistics of Helminthiasis.*— Following the instance of Drs. Banik, Friedrich, Kessler (*vide infra*), and Baronowski (*vide infra*), Dr. Vladimir Gretchaninoff, of Novgorod (Central Russia), contributes his mite to the study of the important question on the frequency of helminthiasis. To determine the latter, he examined the stools from 583 soldiers of the local garrison. The search for ova was repeated in each instance daily for four or five days, the particles of the patient's fæces (taken from the anus, just after defecation) being mixed with glycerine, crushed between two object-glasses, and examined by a fairly low magnifying-power (90). Of the 583 men, as many as 337, or 37·8 per cent., proved to have intestinal worms. The latter belonged to the following four species: ascaris lumbricoïdes, trichocephalus dispar, oxyuris vermicularis, and bothriocephalus latus. Of 440 examinations with positive results, ascarids were found 218 (37·39 per cent.) times; trichocephalus, 154 (26·41 per cent.); oxyuris, 64 (10·98 per cent.); and bothriocephalus, 4 (0·6 per cent.). The principal corollaries deduced by the author from his researches may be summed up somewhat as follows:—(1) Intestinal parasites in general occur in peasants more frequently than in town-inhabitants (all the soldiers had been recruited from peasantry). Of 240 recruited in 1890 (that is, just before their coming under the author's observation), 147, or 61·25 per cent., had worms. (2) Tape-worms, however, infect peasants by far less commonly than town-inhabitants (which is easily explained by the fact that the Russian peasant, being an agricultural proletary, is a *volens nolens* vegetarian). (3) But ascarids attack peasantry a good deal more frequently than a town-population. (4) The explanation for such great frequency of round worms in villagers should be sought in a general rustic uncleanliness. (5) The West Russian peasants are infected by ascarids more commonly than the Great Russian ones, the former being much more uncleanly in their habits than the latter (round worms were found in 43·28 per cent. of West Russian men, and only in 31·15 of Great Russian). (6) Trichocephalus occurs in Great Russian peasants less frequently, but in West Russian ones far more commonly, than in town-inhabitants. (7) Oxyuris is met with in West Russian peasants more rarely than in Great Russian ones (6·88 per cent. against 16·54). (8) The barrack-life decreases the frequency of round worms most markedly (after a year's service, the percentage sinks from 81·8 to 32). (9) Abstinence from alcohol does not seem to diminish the frequency of ascarids or trichocephalus. [At the suggestion of Prof. V. A. Manassein, Dr. Dmitry A. Kessler (*St. Petersburg Inaugural Dissertation*, 1888, No. 12, p. 30), has microscopially examined fæces from 600 inhabitants of St. Petersburg (496 male, 104 female). Intestinal worms proved to be present in 169 (28·16 per cent.) persons. Of 208 subjects under fourteen years of age, 91 (43·75 per cent.) had parasites; of 278, aged from fourteen to twenty, 42 (15·1 per cent.); of 114, aged from twenty to fifty-nine, 36 (31·57 per cent.). Trichocephalus dispar was found in 4·73 per cent. of adult men; 12·12 adult women; 4·32 children. Ascarids, in 3·34 men; 3·03 women; 10·57 children. Oxyuris, in 3·9 men; 0 women; 13·94 children. Bothriocephalus, in 5·57 men; 30·3 women; 8·17 children. Tænia solium, in 2·78 men; 6·06 women; 2·88 children. Tænia mediocanellata, in 2·78 men; 12·12 women; 3·84 children. Of 196 persons belonging to well-to-do classes, trichocephalus was found in 7·65 per cent.; ascaris, in 7·12; oxyuris, in 6·63; bothriocephalus, in 10·2; and tænia, in 8·16. For 289 working-men and soldiers, the respective percentages were 3·80; 4·84; 7·26; 5·53; and 4·15. Referring to Drs. Kessler's, Baarnowski's and Gretchaninoff's investigations, Professor Manassein (*Vratch*, 1890, No. 25, p. 567) emphasises the great frequency of helminthiasis, and points to a high practical importance of a careful examination of the patient's stools in every case coming under the practitioner's observation and care. To illustrate the effects occasionally produced by intestinal worms, as well as the results of a rational treatment of such cases, he adduces two very instructive instances of

reflex neuroses caused by the parasites, and cured by simple anthelmintic means.)—*Rep.*]

696. *Baranowski on the Frequency of Intestinal Worms amongst the Population of Moscow.* — Dr. Bronislaw F. Baranowski (pronounced *Bronislav Baranovskee*, a Polish name) has examined fæces from one thousand inhabitants of Moscow, his aim being to search for ova of intestinal worms, and to appreciate in this way the frequency of helminthiasis in the Central Russian capital. In each case, from ten to fifteen specimens from the patients' stools were taken, the preparations being mounted in glycerine and examined under the microscope. The author's main conclusions, briefly told, are these:—(1) In Moscow intestinal parasites occur fairly frequently. [Of 1,000 persons examined, ova of various worms were found in 331 or 33·1 per cent.] (2) Women are infected more commonly than men. [Of 378 women examined, 146, or 38·15 per cent., had worms; of 622 men, only 185, or 29·74 per cent.] (3) In children, the parasites occur more frequently than in adolescents and adults. [Of 222 subjects under fourteen years of age, as many as 101, or 45·49 per cent had worms; of 130, age from fourteen to twenty, 45, or 34·61 per cent., were infected; of 621, age from twenty to sixty, 181, or 29·14 per cent.; of 27, aged from sixty to eighty, 4, or 14·81 per cent.] (4) The following helminthic species are met with in Moscow: ascaris lumbricoïdes, oxyuris vermicularis, trichocephalus dispar, bothriocephalus latus, tænia solium, tænia mediocanellata. (5) Ascarids and bothriocephalus occur most frequently, tænia solium most rarely. [Round worms were found 101 times, or in 10·1 per cent.; oxyuris 80, or 8 per cent.; bothriocephalus 89, or 8·9 per cent.; trichocephalus 53, or 5·3 per cent.; tænia mediocanellata 26, or 2·6 per cent.; tænia solium 11, or 1·1 per cent.] (6) Trichocephalus infects adults more frequently than children. [It was found in 7·8 per cent. of men, 3·78 of women, and only 1·8 of children.] (7) Ascarids and oxyuris infect children more commonly than adults. [Ascarids were discovered in 24·32 per cent. of children; 6·16, men; 5·84, women; oxyuris, in 18·46 children; 4·11 men; 6·53 women.] (8) Tape-worms infect children but rarely. [Bothriocephalus was found in 4·05 per cent. of children, 6·36 men, and 16·84 women; tænia solium, in 0·45 children, 1·03 men, and 1·71 women; tænia mediocanellata, in 0·45 children, 2·05 men, and 5·15 women.] (9) During the autumn months, intestinal parasites are met with more frequently than during the winter and summer ones. [Of 351 persons examined in the autumn time, 145, or 41·31 per cent., proved to have worms; of 341 examined in the winter time, 119, or 34·89 per cent.; of 308 in the summer time 96, or 31·17 per cent.] (10) Ascarids seem to occur most frequently about the end of the summer season, and during the autumn; bothriocephalus during the autumn and winter; while trichocephalus appears to occur with equal frequency in all the four seasons. (11) Hebrews are infected with worms somewhat more frequently, comparatively with other nations. [Intestinal parasites were found in 39·65 per cent. of Hebrews examined, in 36·42 of Russians, in 30·55 of Germans, etc.] Bothriocephalus occurs in them more frequently (*a*) than other helminthic species, and (*b*) than in other nations. [Bothriocephalus was found in 13·79 per cent. of Hebrews examined, ascarids, in 12·07; oxyuris, in 8·62; trichocephalus, in 5·17. In Russians the respective figures were 9·14, 10·28, 8·12, 5·08, in Germans 6·94, 5·55, 6·94, 6·94, etc.] (12) Ascarids are met with most frequently in (*a*) school-pupils (in 16·29 per cent. of all pupils examined), (*b*) greengrocers (in 12·50), (*c*) housewives (12·5). In poor classes of the community they occur by far more frequently than in the well-to-do. (13) Oxyuris is observed most frequently in (*a*) seamstresses (12·5 per cent.); and (*b*) school-pupils (11·85). (14). Tænia mediocanellata attacks most commonly (*a*) butchers (7·89 per cent.), (*b*) cooks (6·06), (*c*) housewives (5·36). (15) Intestinal worms may give rise to manifold systemic derangements. [Of 306 hosts, 88 did not appear to have any symptoms distinctly attributable to the presence of the parasites; but in the remaining 218 there were observed gastro-intestinal disorders (in 39), nervous affections (25), chronic anæmia and malnutrition (17), giddiness (6), swoons (6), vague malaise (131), etc. It is interesting to note, by the way, that of sixteen patients suffering from scurvy, in seven ova of the trichocephalus dispar were discovered.] (16) An overwhelming majority of helminthic patients have no suspicion whatever concerning their being hosts of these or other parasites. (17) In all etiologically-obscure cases of anæmia, emaciation, and gastro-intestinal or nervous disturbances, the patient's stools should be at once subjected to a careful microscopic examination in order to search for ova.

Valerius Idelson, M.D.

697. *Thistle and Caven on a Case of Intra-cranial Tumour.*— J. S., aged ten, admitted to Toronto Hospital for Sick Children, January 3, 1890, complaining of sickness, frontal headache, and mental dulness. Well nourished. Staggers in gait, sometimes to right, at other times to left. Pupils slightly dilated, react to light. Patellar reflexes exaggerated. Skin dry; bowels constipated; easy vomiting occurs directly after food, January 9.—General convulsive seizure; became stiff and eyes fixed. January 23.—Pupils unequal. January 26.—General tonic spasm, lasting a few minutes; complete opisthotonos; eyeballs jerked from side to side. Slight lateral nystmagus. February 3.—Three fits, with opisthotonos and jerking of eyeballs; right pupil double size of left; passed urine in bed. February 4.—Internal strabismus right eye. February 6.—Blind; gave same answer to all questions. February 12.—Internal squint, left eye. February 19.—Fit; right pupil larger; unable to stand; sways about, and finally falls backwards. February 22. — Double optic neuritis. February 25. — Squint in left eye; slow lateral nystagmus; urine and fæces voided in bed. March 10.—Spasms tonic and clonic. March 21.—Three severe fits, tonic. March 30.—Tonic spasms for four hours; contracted pupils; death. From these symptoms a diagnosis of intra-cranial tumour was made, probably cerebellar, or pressing on the cerebellum, and, in all probability, interfering with the corpora quadrigemina. The autopsy showed a growth, the size of a hen's egg, upon the crura cerebri, bounded by the third ventricle in front, and the middle lobe of the cerebellum behind. Superiorly it was partly covered by the velum interpositum. The corpora quadrigemina and pineal gland appeared to have been completely replaced by the new growth. The middle lobe of the cerebellum was also damaged, and the lateral lobes slightly so, by pressure. Microscopically, the growth proved to be an alveolar sarcoma. There was a considerable quantity of fluid in the ventricles, but not sufficient to flatten the convolutions. From a clinical standpoint, this case

is interesting, mainly on account of the fact that the symptoms allowed of such accurate localisation. The latter was based upon (*a*) staggering gait, swaying when standing, and finally falling backwards. These point to cerebellum as seat of lesion. (*b*) Character of convulsions, tonic spasms, pointing to cerebellum. (*c*) Irritation of corpora quadrigemina in monkeys produces similar convulsions. (*d*) Sudden supervention of blindness points to injury of corpora quadrigemina.

DAVID WALSH.

698. *De Saussure on Cases of Filaria Sanguinis Hominis.*—The author gives brief notes of twenty-two cases of this curious malady, which came under his observation at Charleston (U.S.A.), between the years 1886 and 1890. Tabulating the cases, he found that the disease was distributed as follows: nine colored males, six colored females, five white males, and two white females. Of the twenty-two cases sixteen were in married people, all of whom had children. In over one-half of the cases filaria were searched for in children of the married, in husbands or wives, or in friends and bed-fellows of the single ones; and yet but in a single instance did he find two cases in the same house. In one instance, however, he thinks that if the search could have been carefully carried on, filaria would have been found. As to the social conditions of the patients, fifteen were colored, seven white; of the latter, only three can be said to be in high life. All of the others, black and white, belong to the lower and middle classes, a difference he is at a loss to account for. In reference to the diet and water, the former is that of the working class in other cities, only that here they eat a great deal of fresh fish, in fact, during the summer months, fish of some sort takes the place of meat. The drinking water, amongst the lower classes, is mainly pump or artesian, and, exceptionally, cistern-water. Sometimes, for a short period just after rain-storms, the poor have barrel-water, but the supply soon runs out, and they go back to the pumps and artesian wells. The barrel-water, which is rain-water caught in barrels and casks open to dust and dirt, is, necessarily, impure. The same is true of the artesian water, which, though it comes from wells 1,800 to 1,900 feet deep, is, before being served, stored in an open reservoir, which is bricked halfway down the sides, but only puddled at the bottom. The better class of Charlestonians drink cistern-water. Diagnosis of the disease can alone be made with the microscope, for by reference to the table attached to this paper we find that chylocele, chyluria, lymph-legs, and glandular enlargements, are frequently found, yet examinations of the blood may fail to show filaria. Again, filaria may exist without any of these disturbances. There is no pathognomonic symptom; sometimes there is fever with chills, at other times neither. The disease, as a rule, does not appear to prevent the patients from working. To this rule there were exceptions, and some of the other patients were for a time disabled, but returned to their duties, and the filaria were still found when looked for. The chyluria is intermittent, and in no case was it always present; however, during its presence, a given specimen of blood would not show more filaria than another specimen examined when chyluria was absent. In only two cases had he ever failed to find filaria after having once seen them. In one instance, residence for three months at an elevation of 2,000 feet above the sea-level always reduced the number of filaria, but after being in Charleston for eight months they became numerous again. To show the impossibility of making a diagnosis without the microscope, the author observes that, during the last three years, he had examined three cases of chylocele with negative results (blood of two, fluid of one). Six cases of chyluria, and one of hæmato-chyluria, also gave negative results, though one of these may yet prove to be a case of filaria, for it occurs in a patient who is a printer, and as yet it has not been possible to examine him at the end of his work, which is about 5 a.m. Five cases of elephantiasis of the leg have been under observation, but no filaria were found. Learning from the local veterinary surgeon that filaria were very common in the dogs of Charleston, with his and other assistance, he made some observations on the disease in the dog, and he found that the embryo filaria in man and dog were identical, those of the man being possibly a little larger, and their movement more active and strong. Very early in the investigation he was surprised to find that in the dog the embryo filaria could be found at any time of the day or night. In man it is different, for he had been able to find them in the day but twice, once at 10 a.m. in the negress from Africa, and once at 5 p.m. (summer). Carrying the investigation still further, he examined fleas from filarial dogs, but got negative results, until one morning, when he found two filaria in the body of a flea which was taken from a diseased dog. He hopes this observation may be confirmed, for it would throw considerable light on the mode of infection. In the dog the disease causes death from ascites, which seems to be in consequence of the adult filaria collecting in the heart, a condition that we found in five *post-mortem*. It is worthy of remark that in the one case of death occurring in a patient known to be afflicted with filaria, the cause of death was "dropsy with heart failure." No *post-mortem* was allowed, so the presence of the adult filaria in the heart was not proven. It is suspicious that in four cases heart-murmur and dropsy were noted.

Pharmacology and Therapeutics.

RECENT PAPERS.

699. DILLON BROWN, DR.—On the Surgical Treatment of Erysipelas. (*Arch. of Pediatrics*, July, 1890.)

700. HAYEM, DR.—On Lactic Acid in the Treatment of Diarrhœa. (*Médecine Moderne*, July 5, 1890.)

701. SEE, PROF. GERMAIN.—On Cannabis Indica in the Treatment of Affections of the Stomach. (*Bull. Med.*, July 30, 1890.)

702. HALLOPEAU, DR.—On Treatment of Obstinate Impetigo of the Margins of the Lips by means of Linear Scarifications. (*Revue de Thérapeutique*, July 15, 1890.)

703. VOITURIEZ.—On a New and Simple Method of producing Local Anæsthesia. (*Revue de Thérapeutique*, July 15, 1890.)

704. WOLF, DR.—On Iodide of Potassium in very large doses in Syphilis. (*Revue de Thérapeutique*, July 15, 1890.)

705. FILATOFF, DR. N.—On the Use and Effects of Sunflower in Malarial Fevers. (*Novosti Terapii*, Nos. 25 and 26, 1890, p. 365.)

706. HEHIR, DR.—On Salol in the Treatment of Cholera. (*Indian Med. Gaz.*, June, 1890.)

ART. 699. *Dillon Brown on the Surgical Treatment of Erysipelas.*—In view of the encouraging results obtained in erysipelas by recent operative methods, Dr. Dillon Brown thinks the following case worthy of record:—Grace E. M., aged five and a-half months, had an acute abscess over the right tibia, which was incised on April 8th. On April 11th a characteristic erysipelatous patch developed, four inches below the opening of the abscess, and was accompanied by fever, vomiting, and marked prostration. In spite of carbolic-acid applications, and a thick ring of collodion painted entirely round the leg above the inflammation, and the usual local and constitutional treatment, the erysipelas continued to spread, and the patient's condition grew worse. On April 13th the erysipelas had spread three inches above the knee, on the outer side, and to the upper edge of the patella on the inside. The temperature was 104·5, and the pulse 178. The child was seemingly going into a condition of collapse, and the case appeared hopeless unless the extension of the disease could be speedily stopped. Under chloroform anæsthesia, the Kraske-Riedel fence was made with a scalpel in the healthy tissues above the erysipelas and completely encircling the thigh. These scarifications were dressed with gauze wet with a solution of bichloride of mercury (1 to 1000). Both before and after the operation the thigh was thoroughly scrubbed with a solution of the same strength. Two hours later the site of the operation was marked by a red, elevated, angry band, which seemed to be erysipelatous, but which, probably, was due to the irritation of the bichloride of mercury. The inflammation rapidly travelled into the scarified area, but did not pass above this barrier. The next morning the baby was better in every way. Temperature, 100°. In three days the child was convalescent, and she completely recovered. J. B. BALL, M.D.

700. *Hayem on Lactic Acid in the Treatment of Diarrhœa.*—The author has on several occasions called attention to the value of lactic acid in the treatment of infantile diarrhœa, but it also proves very useful in the same affections occurring in adults. He observes that, in small doses, it appears to exercise a beneficial effect on gastric digestion. In moderate quantities, it is probably absorbed and undergoes combustion in the blood; but the administration of large doses (over ten grammes daily) is promptly followed by its appearance in the urine and fæces. He infers, therefore, that in sufficiently large doses, its effects on the large intestines may be obtained. He has never observed any untoward effects following its use, though he has given as much as ten grammes daily for several weeks at a time. He prescribes the acid in the form of a lemonade, for which he gives the formula: ℞ acid lactic, ten to fifteen grammes; syrup simpl., 200 grammes; aqua dest., 300 grammes; half a tumblerful to be taken occasionally between meals.

701. *Sée on Cannabis Indica in the Treatment of Affections of the Stomach.*—The author considers cannabis indica, administered in the form of an extract, to be an ideal gastric sedative in most affections of the stomach, other than organic, associated with pain. When, however, the condition is associated with hyper-acidity large doses of bicarbonate of sodium, given three or four hours after a meal, assist in obviating the symptoms. It is, moreover, useless in atonic and dilated conditions of the stomach. He points out that gastric digestion is facilitated by the drug, and very great relief is afforded to the collateral symptoms, such as vertigo, headache, palpitation, and dyspnœa. It is free from the inconveniences that attend the exhibition of narcotics, such as opium, chloral, &c., but its use does not, of course, preclude resort to the ordinary curative treatment, both dietetic and medicinal. The drug should preferably be employed in the form of a crude extract, in doses, three times daily, of a third of a grain. The active principles extracted from the plant failed to yield the same satisfactory results. ALFRED S. GUBB.

702. *Hallopeau on Treatment of Obstinate Impetigo of the Margins of the Lips by means of Linear Scarifications.*—Hallopeau has read a paper on this subject before the "Société française de Dermatologie." The obstinate nature of this skin affection is well known, and Kaposi has stated that in order to cure it, one is frequently obliged to have recourse to cauterisations with a concentrated solution of potash. A patient, shown to the society by the author, had been suffering for two years, and every treatment applied had been without result. He was obliged to abandon his studies at the *Conservatoire*, and renounce his career as a dramatic artist. Three applications of linear scarifications, practised after the method of M. Vidal, and followed by the use of boracic ointment, rapidly brought about a cure which has been lasting. This case proves that a slight modification of nutrition in a part affected by eczema is sufficient to cause the disappearance of the condition which is the proximate cause of this eruption.

703. *Voituriez on a New and Simple Method of producing Local Anæsthesia.*—The anæsthetic effects of carbonic acid gas, described by Brown-Sequard, are obtained in an extremely simple and practical manner by means of the ordinary syphons containing mineral water charged with the gas in question. The anæsthesia is obtained by projecting, from a distance of three or four inches, the contents of two or three syphons of seltzer water, limiting the application to the portion of skin about to be incised, or otherwise dealt with. The insensibility to pain lasts about five minutes, and then gradually disappears. The irrigation can, of course, be repeated if necessary. The indications for this method can be formulated as follow:—When the ordinary instruments, more or less complicated, for producing local anæsthesia are not at hand. When the duration of the operation about to be performed does not exceed ten or fifteen minutes. This method of producing local anæsthesia should be confined to the limbs, as the irrigation is not without inconvenience when applied to the head, neck, or trunk.

704. *Wolf on Iodide of Potassium in very large doses in Syphilis.*—The writer has treated numerous cases presenting tertiary symptoms, in which mercury had been employed without avail, by means of iodide of potassium in doses of thirty, and even fifty grammes (450 to 750 grains) per day. The drug was administered in a decoction of rice in order to prevent iodism, any free iodine formed in the stomach being thus immediately converted into iodide of starch. Complete tolerance of the drug was thus easily obtained. Cases of ulceration of the pharynx and tonsils, and a case of arthritis of the knee, with osteophytic growths, were rapidly cured. A patient, presenting grave symptoms, in whom treatment with iodide of potassium in doses of three grammes (45 grains) per day at first, and subsequently of eight

grammes (120 grains) per day, had produced no result, began to improve at once whence the dose was raised to thirty grammes (450 grains), and was completely cured after taking fifty grammes (750 grains) per day during three consecutive months. He consumed in all five kilogrammes of the drug, and increased in body weight to the extent of fourteen kilogrammes.

W. A. Fitzgerald, M.D.

705. *Filatoff on the Use and Effects of Sunflower in Malarial Fevers.*—At a recent meeting of the Moscow University Physico-Medical Society, Dr. N. Filatoff read a very interesting paper in which he warmly advocated the treatment of malarial fevers by the internal administration of the sunflower (*Helianthus annuus*, Russ. *podsolnetchnik* or *podsolnukh*) in the shape of a tincture, which may be prepared after the following two simple methods: (i) One part of minced dry stems (or recent stems with flowers) of the plant, and eight parts by weight of *vodka* (aquavit), are put into a well-corked bottle and left to stand at a sunny place for six days, after which the contents are thoroughly strained through a piece of linen. The colature should be given—one spoonful to a child and two spoonfuls to an adult—three times a day. (ii) The other method consists in similarly treating one part of the herb with five parts (by weight) of spirit-of-wine. The tincture is administered—to children from ten to fifteen drops, to adults a small wine glassful (a liqueur-glassful)—three times daily. According to the author's extensive experience, the sunflower affords an invaluable substitute for quinine; in fact, it is said to be superior to the latter, as far as the treatment of intermittent fevers is concerned, since (*a*) it cures in five or seven days such cases in which quinine and arsenic have proved entirely inefficacious; (*b*) in such cases where no quinine (or arsenic) has been previously tried, the sunflower proves to be, to say the least, as effective as quinine; (*c*) the remedy strikingly improves appetite, the patient rapidly gaining flesh, and growing stronger under its influence; (*d*) the remedy is exceedingly cheap and easily accessible everywhere; (*e*) it is totally free from any slightest disagreeable accessory effects; (*f*) it has a pleasant taste, which is especially advantageous in infantile cases. [The sunflower, an exceedingly common plant all over Russia, has been regarded as a sovereign antimalarial remedy in the Russian (as well as Persian and Turkish) popular medicine from time immemorial. In 1879, Dr. Petr Filatoff, of Saransk, was the first (in Russia) to introduce the popular remedy into scientific practice. In a short paper in the *Meditzinskoie Obozrenie*, 1879, lqt. p. 348, he drew attention that recent cases were cured by the (one to eight) tincture (given a tablespoonful three times daily to an adult) in from one to three days; inveterate ones in about one week, the remedy being equally beneficial in all types of the fever, in men and women, young and old. Later on, his statements were fully endorsed by Drs. S. Kazatchek (*vide* the *St. Louis Medical and Surgical Journal*, September, 1889, p. 179) and Al. T Maminoff, of Moscow (*vide* the *Provincial Medical Journal*, February, 1890, p. 114). According to Dr. Richard Neale's "Medical Digest," sec. 559: 4, in 1859 Dr. Maury recommended the cultivation of the sunflower in malarial regions as a means for destroying the miasm, the plant possessing the power of absorbing large quantities of the morbid principle. In his monograph on "Quinine and its Use in Malarial Fevers" (St. Petersburg, 1871, p. 240), Dr. N. Toropoff says that the same prophylactic measure was also recommended emphatically by Van Alstein, Martin, and Valentin. By the way, Dr. Bernard Verzascha, of Basle, in his highly curious and interesting "Neu Vollkomenes Kræuter-Buch," published in 1679, p. 441, highly eulogises (*a*) a local application of recent flowers of the plant as a means for rapidly healing any wounds, and (*b*) washing out venereal sores (*Geschwœre der heimlichen orten*), with a decoction of the flowers in red wine mixed with a little alum. On the whole, the sunflower appears to be worthy of further therapeutic and pharmacological investigations.—*Reporter.*]

Valerius Idelson, M.D.

706. *Hehir on Salol in the Treatment of Cholera.*—At Hyderabad, in 1889, eighty-eight cases of cholera came under the author's direct supervision and treatment. In the first seventy-seven of them, he adopted the perchloride of mercury treatment, with thirty-nine deaths. A mortality of 44·7 per cent., on about what might be anticipated from any system of expectant treatment. At this period his attention was directed to the reported good results from salol, and he therefore used it in the remaining cases, eleven in number. They all recovered. Ten grains were given to each patient every two hours, the maximum quantity given to any one case was ninety grains, and the minimum, forty grains. The effect of the drug seemed to take a *gradual* abatement of all the symptoms. Two effects were especially manifest, a shortening of the period of convalescence, and an absence of symptoms of uræmia. Dr. Hehir rightly points out that too much weight should not be attached to these unusually good results. They were the final cases in an epidemic, and it has long been recognised that the mortality is much lower in the last attacks of an expiring epidemic of cholera, than in those occurring at an earlier stage of the outbreak. In the same journal, Dr. Stevenson reports four cases from Calcutta, which were treated with salol. They all proved fatal, but he thinks that the drug had some effect in lessening the severity of the symptoms. The germicidal properties of salol, on the comma-bacillus of Koch, were first demonstrated by Professor Löwenthal. It must be admitted, however, that the comma-bacillus has not been proved to be the cause of cholera. The German Cholera Commission, only showed that the comma-bacillus was "probably" the cause of the disease, and the English Cholera Commission, having gone over the same ground as the Germans, showed that the comma-bacillus was found in other cases besides those of cholera, and that it exists in tanks from which people drank the water, without taking cholera.

Gynæcology and Obstetrics.

RECENT PAPERS.

707. Popoff, Dr. Dmitry D.—On the Study of Ovarian Changes in Cases of Uterine Fibro-myomata. (*St. Petersburg Inaugural Dissertation*, 1890, No. 55, p. 112, with eight figs.)

708. Potter, Dr. Theodore.—On a Case of Twin Pregnancy, with Placenta Prævia, Blighted Fœtus; Recovery after Artificial Delivery. (*New York Medical Record*, July 19, 1890.)

709. Hæberlin, Dr.—On a Case of Pregnancy Complicated by Exopthalma Goitre. (*Centralblatt für Gyn.*, No. 26.)

710. Miller, Dr. Katherine.—On Vaginal Irritation as a Cause of Bladder Symptoms in Young Girls. (*New York Medical Record*, July 5, 1890.)

711. Hirst, Dr.—On a Case of Ovarian Cyst, complicating Pregnancy and obstructing Labour. (*Med. News*, July 12, 1890.)

712. Terrillon, M.—On Ovariotomy Statistics. (*Médecine Moderne*, July 5, 1890.)

713. Kelly, Dr. Howard A.—On Hystero-myomectomy with Suspension of the Stump in the Lower Angle of the Abdominal Incision. (*Med. News*, June 21, 1890.)

714. Herzfeld, Dr. Karl A.—On a Case of Rupture of the Uterus Cured without Operation. (*Allg. Wiener. Med. Zeitung*, 1890, No. 6.)

Art. 707. *Popoff on Ovarian Changes in Cases of Uterine Fibroids.*—Dr. Dmitry D. Popoff, of St. Petersburg, publishes a valuable monograph on the subject, embodying his own histological researches (under Professor A. S. Lebedeff's guidance). In all, he examined forty ovaries which had been removed by operation from twenty women suffering from uterine fibroids. The patients' age varied from 25 to 51, twelve being aged from 35 to 45. Two were virgins; of the remaining eighteen, twelve were sterile, three had each one child, and three each two children. In every one of the twenty, catamenia were very irregular (all having profuse and painful menstrual flow, &c). In two patients cavernous, in eighteen solid, fibroids were present, the tumours being usually of an intramural variety. The essential outcome of the author's work may be condensed as follows:—(i) In cases of uterine fibroids the ovaries are found to be diseased almost invariably, the morbid changes, however, varying in their intensity and affecting, in some cases, mainly the organ's surface (*tunica albuginea*), in others the interstitial tissue (stroma), or the parenchymal follicles. (ii) The interstitial tissue suffers most constantly (in nineteen out of twenty cases, or in thirty-eight out of forty ovaries), the morbid process having the nature of a chronic inflammation (*oöphoritis interstitialis chronica*), and being characterised by hyperplasia of the connective-tissue stroma, with a corresponding increase in the bulk of the organ. [According to Henle, a normal ovary varies from 2·5 to 4 centimètres in length, from 2 to 3 in width, and from 0·7 to 1·2 in thickness. In Dr. Popoff's cases twenty-two ovaries proved to be enlarged in length (up to 7 centimètres), eleven in width (up to 4 centimètres), and twenty-eight in thickness (up to 3 centimètres). Seven ovaries were abnormally large in all the three dimensions.] (iii) The interstitial process occurs either equally diffused over the whole cortical layer, or localised in the shape of isolated and scattered small-sized foci. Sometimes it is found to be most pronounced in the vicinity of blood-vessels and nerve-stems; it is then accompanied by thickening of the vascular walls, with consecutive narrowing, or even complete obliteration of the vessel's lumen, or by thickening of the nerve-sheath with atrophy of individual nerve-fibres. (iv) Very frequently the ovarian follicles prove to be simultaneously affected (such was the case in seventeen out of thirty-eight ovaries attacked by chronic interstitial oöphoritis), and that in two ways. (*a*) Either an increased growth of the follicles is observed, and then the ovary is found to contain numberless minute cysts (the so-called "small cystic degeneration"), which, histologically, represent nothing else than Graafian follicles in various stages of their evolution; or (*b*) the follicles are destroyed undergoing obliteration (atresia). The latter may equally affect both primordial and riper follicles. (v) The atresia may develope, consecutively, to small cystic degeneration. In such cases the dilated follicles ultimately transform into characteristic white bodies (*corpora albicantia*) of corresponding size, resembling those found at the site of ordinary yellow bodies (*corpora lutea*). (vi) Such obliteration of hyperplastic Graafian follicles seems to constitute the most frequent issue of parenchymatous ovaritis (*oöphoritis follicularis*). One of differential features of the corpora albicantia in comparison with those developing from corpora lutea, consists in the absence of yellow cells, though, occasionally, there may be found heaplets of blood-pigment in the centre, or on the periphery of the white bodies. (vii) Medullary strata of the ovary sometimes present great vascularity. (viii) The epithelium lining the free surface of the organ is usually absent, but in depressions and slits, as well as under false membranes (where the latter happen to be present, as was the case in four patients of the author), it remains intact. It does not show, however, any tendency to proliferation; on the contrary, it appears to ultimately undergo regressive metamorphosis and disintegration. (ix) The morbid changes in the ovaries are caused by permanent congestion of the genital organs, induced by the presence of uterine fibroids. (x) The ovarian changes constitute one of the causes of sterility in women suffering from uterine fibroids, another cause being given by morbid alterations arising in the mucous membrane of the Fallopian tubes, and sometimes attaining high degrees.

Valerius Idelson, M.D.

708. *Potter on a Case of Twin Pregnancy, with Placenta Prævia; Blighted Fœtus; Recovery after Artificial Delivery.*—Consulted on August 3, 1889, by husband; age thirty-four; five children; no miscarriages. Last three, healthy; first two, delivered by forceps, dead. Has missed two menstrual periods, but has constant feeling as if flow were about to commence. Supposes herself about two-and-a-half months pregnant, but cannot account for the size of the uterus, which is abnormally big. A week later, she had slight discharge now and then, tinged with blood. On August 20th, she slipped and fell, with no immediate ill effect, but on the 27th she had profuse hæmorrhage. On the 30th, another profuse flow. On 31st, saw patient for the first time. There was a slight oozing, the cervix being barely within reach; no fœtal heart, but the placental *bruit* exceptionally distinct. The uterus was the size of fifth month, irregular and hard. Diagnosis: pregnancy, placenta prævia, perhaps complicated by a fibroid. The cervical canal admitted finger, but not through internal os. On September 3, the discharge was found to contain placental tissue. Immediate delivery resolved upon. The cervix was dilated with fingers, which struck the presenting placenta, completely covering the internal os. The finger was swept round, tearing loose and removing all within reach. Hæmorrhage ceased, and the finger passed round an apparently empty cavity, the size one would expect at three months. No fœtus was found, but was supposed to have escaped along with the clots. The uterus having been washed out with bi-chloride solution, a tampon was applied. Next day, Dr. Potter was summoned hastily, and found the patient bleeding. He introduced hand into uterus, and removed,

first, the remainder of the placenta prævia from the wall above the internal os (which was found afterwards to contain a mummified fœtus an inch long); secondly, a fœtus fully five months old; thirdly, the placenta belonging to the latter. Recovery rapid. The condition of things would seem to have been as follows:—A twin pregnancy occurred; the lower placenta was prævia, not centrally implanted, but sufficiently near it to cover the internal os; the upper part of this placenta and its fœtus was pressed upon by the other products of conception. Perhaps this was the cause of the blighting and of the peculiar attachment of the sac. The fœtus died and mummified, while the placenta continued to grow, though imperfectly. Among the questions suggested by this case are—Was there a genuine menstruation, as the patient thought? What aroused the hæmorrhages; was it the mere presence of the placenta prævia, the conditions arising from the fact that it was time for the menstruation to occur, or the fall of the week previous? Which placenta bled first? Was it bleeding from the placenta prævia which excited the uterus, made it contract, and partially detach the other, or did the fall cause hæmorrhage from the upper placenta, and thus start the final disaster? Both had certainly bled; they were carefully examined by Prof. Harvey, who was positive in this opinion. Why did the blighting of the lower fœtus and placenta occur? was it due to their being caught and squeezed by the other, or was it the result of disease? Of the latter there was and is no evidence. Finally, attention is called without comment to the location of the supposed placental sound, as a diagnostic factor. Both specimens are in the museum of the Indiana Medical College.

709. *Hæberlin on a Case of Pregnancy Complicated by Exopthalmia Goitre.*—The patient was a woman, thirty-six years of age, who had borne six children previously, all having died young. In May, 1889, she began to get thin, and suffered from tremors and general enfeeblement. In August, she became pregnant, and, soon after, the characteristic signs of Basedow's disease made their appearance. On March 2, without any known cause, she was seized with violent hæmorrhage, requiring reiterated plugging of the vagina. On the 9th, the cervix was sufficiently dilated to allow of the extraction of a dead child, presenting no signs of syphilis. A month later, all the symptoms had disappeared. The author suggests that it might be desirable to induce premature labour in the case of a pregnant woman presenting symptoms of Basedow's disease, in the hope of causing its retrogression, and also in order to avert the danger of premature detachment of the placenta.

710. *Miller on Vaginal Irritation as a Cause of Bladder Symptoms in Young Girls.*—The authoress read a paper before the Illinois State Medical Society on this subject, in which she pointed out that more common even than enuresis among girls is a form of irritability of the bladder, manifesting itself chiefly in an inability to retain the urine in the normal manner. It is often complained of in school-girls, who are obliged to leave the schoolroom, even between intermissions, in order to pass the urine, else the bladder, spasmodically contracting, empties itself in spite of every effort of restraint. Even with the promptest attention to its demands, these girls are occasionally subjected to the mortification of wetting their clothing. Oftentimes no complaint is made of any other symptom than this annoying vesical irritability. The condition is more common at the age of six to twelve or fourteen, but may, if untreated, persist indefinitely. Examination reveals an extremely sensitive and hyperæmic condition about the vaginal orifice, and further investigation will show the extension of this tenderness within the vagina. Often this latter investigation can only be made by the use of an anæsthetic, not only because of the small size of the parts, but because of their extreme sensitiveness. Whatever the cause, the treatment must be directed to the removal of the vaginitis, when the bladder will recover its tone. Cleanliness must be enjoined. Not only is careful washing needful, but warm hip-baths are of value. Soothing powders must be dusted on, the vulva being opened as far as possible; and children old enough to understand the aims of the procedure will generally submit to the application, at night, of a small pledget of absorbent cotton, wet with a healing lotion containing pinus canadensis, hamamelis, carbolic acid, or similar remedy diluted with thin boiled starch. Where the urine is normal, rhus aromatica has proved a valuable aid in controlling the habit of irritability of the bladder and relieving the symptoms, till the cause can be removed.

711. *Hirst on a Case of Ovarian Cyst, complicating Pregnancy and obstructing Labour.*—The patient was a married woman, who had had one child twelve years previously. On examination, an abdominal tumour was found corresponding in size to the uterus at the seventh month of gestation. The fœtal heart-sounds were audible. The cervix was discovered high up under the pubes, and behind it could be felt a projection downwards, too soft for a fibroid and too firm for a cyst. Arrangements were made to induce labour two weeks before term by dilating the cervical canal, and then to proceed according to the indications. When the dilation was sufficient to insert a finger in the uterus, the nature of the trouble was discovered to be a tumour in the pelvis, which gave an indistinct sensation of fluctuation. On the chance of the tumour containing fluid, an aspirating needle was plunged through the vaginal vault, and eight ounces of a thick, greyish sebaceous-like liquid slowly flowed into the aspirator bottle. This reduced the tumour in size sufficiently to permit combined version and the extraction of an infant alive, but so deeply asphyxiated that it could not be revived. The mother did perfectly well for four days, when the temperature began to rise. The fever at first was slight, but gradually increased until, on the tenth day, it was evident that there was serious trouble. The symptoms increased in severity, and a week later it was plain that she had not long to live. A laparotomy was then done under partial anæsthesia. A large tumour with dark-coloured walls was seen to the right of and behind the uterus, immovably fixed by dense adhesions. It was punctured, and discharged several pints of horribly fœtid fluid mixed with putrefying solid particles. Enucleation of the tumour was out of the question. The empty sac was stitched to the abdominal walls and drained, the peritoneal cavity was well washed out, the lower part of the omentum, congested, œdematous, and thickened to about one and a half inches, was amputated, and the abdominal wound closed without drainage. As there was a constant discharge of fœtid pus from the sac, the abdominal wound was simply dusted with iodoform, and covered with a piece of absorbent cotton, which was changed every half-hour, as no occlusive dressing could have been kept clean. The wound healed by first intention. The day follow-

ing the operation, the woman's temperature was normal. There were a few rises of temperature during convalescence due to imperfect drainage of the cyst; this was overcome by a counter-opening made into it through the vault of the vagina. Eight weeks after the operation, the patient was on the road to complete recovery.

713. *Terrillon on Ovariotomy Statistics.*—During the last eight years the author has performed two hundred ovariotomies. The mortality of the first hundred was twelve, that of the second, four. The cases comprised one hundred and sixty-six walls-locular cysts, twenty-five par-ovarian cysts, eight dermoid cysts, and one hydatid. In forty-four of the cases the operation was double, but without sensibly affecting the severity. In sixty-five out of the second hundred, the temperature never rose above normal. Of the total number of two hundred, one hundred and seventy-four have been kept under observation. Nine have since died of some independent disease, and the remaining one hundred and sixty-five have remained in excellent health. He attributes his success in the second series to the sterilisation of his instruments, to washing out the peritoneal cavity with boiled water, and to the careful disinfection of the hands and of the sutures.

714. *Kelly on Hystero-myomectomy with Suspension of the Stump in the Lower Angle of the Abdominal Incision.*—The method here proposed is limited to cases conceded to be most favourable for operation —those in which there naturally exists a pedicle, or in which it is possible to form a pedicle below the tumour masses. Typical cases—in which total ablation of the uterus (panhysterectomy) is called for, or those in which the uterus from fundus to cervix is a mass of fibroid tumours—are not under consideration. The author also avoids the important question as to the best method of forming a pedicle when the broad ligament is choked with fibroid tumours. In these cases the author adopts an original method, combining the advantages and eliminating many of the dangers of Hegar's and Schröder's methods—the ordinary extra- and intra-peritoneal methods. The operation consists of seven steps, as follows:—(1) A long incision in the linea alba for the delivery of the myomatous uterus. (2) The elevation of the tumour, until the pedicle is brought into view for treatment by tying the broad ligament structures, or for enucleation of tumours from the broad ligament until a pedicle is formed, when the rubber ligature is applied and tied tightly, controlling the circulation. (3) The tumour is cut away from one to two inches above the rubber ligature by first splitting the peritoneum and thien cupping out the upper face of the stump, cutting with each stroke down toward the vaginal canal. The cervical canal must next be carefully dissected out and its site well cauterized. (4) This consists in the closure of the raw face of the stump by uniting the opposite sides by means of a continous buried suture of catgut. The last row of sutures, which brings the peritoneal surfaces into apposition, is of interrupted silk sutures, with the long ends left uncut, for a purpose to be described later. All of these sutures, buried and superficial, must be applied with the view of controlling the circulation as well as securing approximation. They must, therefore, be drawn tight, and must encircle any vessels in view. (5) After the surface of the stump has thus been closed, and there remains nothing of the wound but the linear union of the peritoneal surfaces, the rubber ligature is cut away, and the lips of the wound are carefully observed. If there is any persistent oozing, the nearest uterine artery must be ligated. This is accomplished by grasping the long ligatures and pulling the stump to the right or left, exposing the site of the left or right artery. A stout needle armed with a catgut ligature is then swept boldly through the side of the stump, well below the sutured area and tied, thus cutting off all communication between the artery and the stump. Both arteries may be treated in this way, without destroying the vitality of the stump. Should there be no bleeding, however, from the closed lips of the stump, the fifth step may be omitted. (6) The abdominal incision is closed down to the stump, putting in a drainage-tube, if needed, well above the stump. Following this, the parietal peritoneum of the abdominal incision is united to the peritoneal coat of the stump, below the lips of the stump, by means of a continuous catgut or silk ligature, and in this way the stump is separated from the peritoneal cavity. (7) The wound is dressed with some dry antiseptic powder, or simply packed under the edges of the skin, around the suspended stump, with antiseptic gauze. Finally, a large square of gauze, six or eight folds in thickness, with a small slit in it, is prepared, and the long ligatures which unite the peritoneal lips of the stump are pulled through the slit. These are lifted well up, and, grasped by a pair of long Keith's forceps, laid horizontally on the body. This dressing serves effectually to keep the stump from pulling back into the abdomen, and the operator has at all times full control of it at a moment's notice in case of accident. This gauze can be changed as often as soiled. Once every two or three days is usually sufficient. The silk sutures uniting the peritoneal lips of the wound finally either come away or are cut loose, and pulled out in about ten days. The small pit which is thus left in the lower angle of the abdominal wound over the stump rapidly fills by granulation. This method has distinct advantages over internal or external methods commonly in use. It is better than dropping the stump back among the intestines. By the new method hæmorrhage is not dangerous, being at all times under control. The danger of sepsis is also removed, a danger to which large numbers of cases have succumbed after the intra-peritoneal treatment of the stump. It is better than the common external method, because, in the first place, it is there necessary to elevate even a short pedicle far enough to attach the parietal peritoneum *below the rubber ligature.* By this method the attachment is higher, and the method is, therefore, better for short pedicles, doing away with a traction which is often excessive. Again, when the rubber ligature is left on, it is impossible to limit the depth of the slough which takes place as the destal end drops off. This procedure, moreover, is a coarse and unscientific means of performing an amputation. ALFRED S. GUBB.

715. *Herzfeld on a Case of Rupture of the Uterus Cured without Operation.*—This case deserves attention, as it shows, like the published cases of Tiskacek and Leopold, that laparotomy is only required in special cases of rupture of the uterus. The patient was a multipara, and the amniotic fluid had escaped three days previously. The fœtus took a transverse position; the medical attendant tried turning unsuccessfully, and then decapitating, also unsuccessfully. The woman was then removed to hospital in a collapsed condition, and examination showed all the signs of rupture of the uterus. The fœtus was in the second-shoulder position, the left hand in the vagina,

and the shoulder wedged in the pelvis. The rupture was on the left of the cervix, three centimètres from the internal os, and permitted the introduction of the whole hand into a large cavity filled with clots, and covered by the peritoneum of the left parametrium. Decapitation was at once performed, and removal of the fœtus and placenta. The rupture was packed with iodoform gauze, also the uterine cavity, and a good bandage was applied externally. The patient did well. On the sixth day, the temperature was only 38·2; on this day the dressings were removed. Some ulcerations of the vagina were touched with iodine tincture, and the vagina washed out with thymol solution, after which she made a good recovery.

E. J. Edwardes, M.D.

Diseases of the Nervous System.

RECENT PAPER.

716 Ross, Dr. Chisholm.—On a Case of Acquired Imbecility accompanied by Undescended Testicle. (*The Australasian Med. Gaz.*, June 15, 1890.)

Art. 716. *Ross on a Case of Acquired Imbecility accompanied by Undescended Testicle.*—This short paper gives notes of a case shown before the New South Wales Branch of the British Medical Association. It is mainly interesting because of the acquired nature of the imbecility apparently following a febrile attack. As regards the absent testicle, no exact information could be gained from the patient, who, however, had a vague recollection of an injury which caused the missing one to disappear. In all probability, the gland had developed, but was retained within the abdomen. The patient was microcephalic, measurement being 19¾ inches in the horizontal circumference, or about five inches under the average. The palate also was unduly arched, and there were other signs of defective development. The febrile attacks to which the imbecility could be traced (exact nature of the fever could not be ascertained) occurred sixteen years ago, when he was five years of age. Up to that time he was of normal intelligence, had learned the alphabet, and was able to count. Since then he has been unable to learn anything. He could not name the letters of the alphabet with any certainty, and was unable to count objects placed in rotation beyond a few figures. Special interest attached to these facts because most congenital idiots or imbeciles are teachable to a considerable extent, provided the ordinary channels of instruction, *i.e.*, the special senses, remain open. In the non-congenital forms, on the other hand, the various interferences with development, or accidents, such as the case shown, preclude the possibility of much, if any, improvement. Comely and winsome non-congenital idiots are often seen who have intelligence (acquired before the interference with development) depicted in every feature, but it is unreal, the shadow without the substance, a picture with true colour, but no substratum of healthy brain canvas. In the case under consideration, the arrest of mental development was fairly complete; but as nearly all idiots or imbeciles possessed the mimetic faculty strongly, he had learned to talk freely, to perform the ordinary functions of life, and, except for a certain loss of will-control, is a useful, well-behaved youth.

Pathology.

RECENT PAPERS.

717. Pokrovsky, Dr. Serghei V.—On Alterations of Venous Walls in Arteriosclerosis: A Histological Research. (*St. Petersburg Inaugural Dissertation*, 1890, No. 64, p. 38.)

718. Gretchikhin, Dr. Alexandr A.—On the Morbid Anatomy of Poisoning by Phenol. (*St. Petersburg Inaugural Dissertation*, 1890, No. 38, p. 70.)

719. La Pratique Medicale.—On the Non-identity of Human Diphtheria and of the Diphtheria of Birds. (*La Clinique*, July 24, 1890.)

Art. 717. *Pokrovsky on Venous Changes in Arteriosclerosis.*—Following the suggestion by Professor N. P. Ivanovsky, Dr. Serghei V. Pokrovsky, of St. Petersburg, has undertaken a histological inquiry into the condition of veins in cases of more or less pronounced arteriosclerosis. His materials were derived from thirty cases referring to thirteen men and seventeen women, aged from 28 to 80 (on an average, about 61). The following veins were examined in each instance: the femoral, popliteal, saphena magna and parva, cava inferior, basilica; in some cases the anterior tibial, common iliac, renal, internal spermatic, and cephalic were also excised. Macroscopically, the vessels, as a rule, did not present any marked changes. Sometimes, however, the intima was found to be studded with circumscribed, irregularly-shaped, elevated white patches of a soft or hard consistence; the soft ones having a fibroid structure, the hard containing lime deposits. In four cases (in those of a very severe arteriosclerosis with abundant calcification) the popliteal veins and saphenæ magnæ were found to contain semi-translucent, hard, circular, or oval concretions of varying size (up to that of a threepenny piece), which were firmly adherent to the intima, their smooth and bare inner surface protruding into the vessel's lumen. The microscopic examination led the author to bring forward the following general propositions:—(i) Chronic inflammation of arteries, described by Lobstein under the name of "arteriosclerosis," and by Virchow under that of "endarteritis deformans chronica," is accompanied by analogous, though less intense, morbid alterations in veins. (ii) As E. Sack (*Dorpat Inaugural Dissertation*, 1887) has shown, the most frequent process is a compensatory diffuse fibroid endophlebitis analogous to Thoma's compensatory diffuse endarteritis. (iii) The endophlebitis commences with the appearance in the vein's intima of abundant young cells which subsequently transform into fibrous connective tissue. The young cells are supplied mainly, if not solely, by proliferation of the intima's old elements; at all events, vasa vasorum do not take any prominent part in the cellular infiltration of the intima. (iv) Beside the diffuse inflammation, there is met a circumscribed nodose thickening of the venous walls, which is usually associated with regressive metamorphosis, and constitutes a "nodose phlebosclerosis" analogous to Thoma's "nodose arteriosclerosis." (v) Of regressive processes affecting products of chronic phlebitis, the first phase is occupied by hyaline degeneration which attacks the interstitial tissue of veins. It is met with in all coats of the vessels, and, apparently, even may occur primarily, without being preceded by any inflammatory stage, especially in large-sized veins. (vi) Somewhat less frequently lime-infiltration is observed, which developes mostly in the intima, and that at such spots where fibroid or hyaline deposits are present. (vii) Fatty degeneration attacks only individual muscle and connective-tissue cells, and, probably, never attains any extensive development. (viii) In cases of intense chronic endophlebitis the vein's median coat very frequently undergoes an interstitial inflammatory process with the formation of abundant blood-vessels, the first stage being characterised by a profuse cellular infiltration, the later ones by proliferation of interstitial connective tissue. (ix) In some cases there occur marked attenuation and dilatation of the circular muscular layer, which may extend along the whole circumference of the vessel. Such attenuation is accompanied by a considerable thickening of the intima at a corresponding level. (x) The adventitia is usually affected in a lesser degree comparatively with the media and intima, its changes consisting in increased vascularity, cellulary infiltration, and occasional fatty and hyaline degeneration. (xi) In view of the fact that arteriosclerosis is always accompanied by phlebosclerosis, the morbid vascular process should be termed "angiosclerosis."

718. *Gretchikhin on Poisoning by Carbolic Acid.*—Dr. Alexandr A. Gretchikhin, of Professor N. P. Ivanovsky's laboratory, in St. Petersburg, describes his physiological and anatomic researches in regard to acute and chronic poisoning by carbolic acid. The experiments were conducted on dogs and rabbits. The drug was used in the shape of a from 1·5 to 5 per cent. aqueous solution, which was introduced either through the rectum or under the skin, the dose of the acid varying from 0·5 to 2 grammes. The following are the main conclusions drawn from the investigations:—(i) Carbolic acid manifests a destructive action on red blood-corpuscles, decreasing both their number and the proportion of hæmoglobin. (ii) The drug causes intense congestion of internal organs, abundant parenchymatous hæmorrhage, and opaque swelling and fatty degeneration of cellular elements of the heart, liver, kidneys, and walls of capillaries. Fatty degeneration must be attributed to decrease of the systemic oxydation processes, which is dependant upon the said destruction of red blood-corpuscles and their hæmoglobine. (iii) In the kidneys, which suffer most severely, carbolic acid also produces parenchymatous inflammation, accompanied by desquamation of the epithelium of the urinary tubes, and effusion into the Bowmanian capsules. In chronic cases, hyaline degeneration of the epithelium is also observed. (iv) In the spinal cord, the drug induces opacity and granular degeneration of ganglionic cells, and fairly extensive capillary extravasations over the grey matter (especially in the anterior horns). (v) The said organic changes may sufficiently explain a profound general prostration occurring in cases of carbolic poisoning. (vi) Carbolic acid gives rise to epileptoid fits (general tonic and clonic convulsions, with loss of consciousness). After the dose of 1 or 1·5 gramme, the fits last from 1½ to 3½ hours; after that of two grammes, from three to five hours. (vii) The convulsive attacks are followed by a fall of the temperature, varying from 0·3° to 1° C. (viii) The administration of carbolic acid requires utmost caution. The same holds true in regard to other compounds of a benzol or aromatic series, such as aniline, pyridine, resorcin, hydro-chinon, etc.

Valerius Idelson, M.D.

719. *La Pratique Médicale on the Non-identity of Human Diphtheria and of the Diphtheria of Birds.*—It was a very general opinion, up to recent times, that the disease called diphtheria in birds was the same affection as human diphtheria, and the belief in this identity has caused very serious disquietude among the public. This anxiety is, however, far from being justified, as recent researches have amply demonstrated that the two affections are due to entirely different microbes. According to Strauss, diphtheria of birds is characterised by an exudation which occurs on the buccal and pharyngeal mucous membranes, which invades the nasal fossæ and the lachrymal canals, and accumulates on the eyelids; but this exudation, thick, caseous and purulent, is altogether different from the fibrinous false membrane of human diphtheria. Thus the diphtheria of birds, which is eminently contagious, has prevailed in a most disastrous manner during certain years at the *Jardin d'acclimatation* without a single case of transmission to man having ever been observed, although children were employed in tending the diseased birds, and M. Saint-Yves Ménard has known two keepers, living in the midst of the aviaries, who successfully reared, the one four, and the other five, children. Strauss brings forward another interesting piece of negative evidence. A certain number of men are employed at the Central Market in Paris in fattening pigeons for the table, the food being administered direct from the lips of the man to the beak of the pigeon. The pigeons thus treated, especially those coming from Italy, are frequently affected by a disease known under the name of chancre, and which is unquestionably diphtheria. Nevertheless, these poultry-feeders have never been known to be attacked by the disease. Moreover, bacteriological studies have clearly demonstrated the non-identity of the two affections. Recent investigations by M. Lœffler, verified and extended by Cornil and Méguin, have shown that the two diseases are caused by microbes, which are essentially distinct, not only in their morphology, but also in their biological characteristics. The microbe of human diphtheria is well known. It is a short bacillus, usually presenting a swelling at one or both extremities, and of about the same length as the tubercle bacillus, but considerably thicker. What distinguishes it, from a bacteriological point of view, is the fact that it cannot develope below the temperature of 22° to 24° (centigrade), and that, in consequence, it cannot be cultivated on nutritive gelatin at the ordinary temperature of 18° to 20°. On the other hand, the microbe of the diphtheria of birds is a straight bacterium, resembling somewhat in appearance the microbe of chicken-cholera or that of the septicæmia of rabbits. Like these, it can be cultivated successfully on potatoes, thus differing from the bacillus of human diphtheria. The effects of inoculation of pure cultures of these two microbes are essentially different. If the human bacillus be inoculated into the cellular tissue of pigeons or rabbits, the animals speedily succumb, presenting at the points of inoculation a fibrino-hæmorrhagic exudation. On the contrary, the inoculation of cultures of the bacillus of bird "diphtheria" hardly ever causes the death of rabbits or pigeons. It produces merely a sort of caseous abscess at the point of inoculation.

W. A. Fitzgerald, M.D.

Bacteriology.

RECENT PAPER.

720. Gasser, Dr.—On a New Method of Differentiating the Typhoid Bacillus. (*Bull. Med.*, July 23, 1890.)

720. *Gasser on a New Method of Differentiating the Typhoid Bacillus.*—The following procedure is claimed to give more reliable results than those in general use. About twenty drops of a saturated aqueous solution of fuchsine are added to the tubes of *gelose*, which are then sterilised. After the *plaque* is solidified, the typhoid bacilli are sown in rows, and it is then placed in a warm chamber at 37° C. In about twenty-four hours development takes place, and the *gelose* is decolourised in the immediate neighbourhood. In eight days later the whole *plaque* is decolourised, while the culture itself is of a bright red colour. Comparative experiments show that the typhoid bacillus and the *bacillus coli communis* alone decolorise the tinted medians; but the mode of development of the two is quite distinct, the latter being limited to the initial line, while the former spreads out into a—more or less wide—coloured band, with irregular sinuous edges. ALFRED S. GUBB.

Syphilography.

RECENT PAPERS.

721. USASS, DR. MATVEI S. — On Primary Syphilitic Sclerosis of the Upper Eyelid. (*Vratch*, No. 9, 1890, p. 215.)

722. GRZIBOWSKI, DR. PIOTR I.—On Extra genital Venereal Sores and Soft Chancre of the Thumb. (*Vratch*, No. 9, 1890, p. 218.)

ART. 721. *Usass on Hard Chancre of the Upper Eyelid.*—Dr. Matvei S. Usass, of St. Petersburg, reports a case of a laundress in whom primary syphilitic sclerosis developed on the upper eyelid. According to the woman's statement, about two months before her coming under the author's observation, when she had been washing linen, some soapy water had got into her eye. A week later the eye had become swollen and painful, and it grew worse. In view of the fact, however, that on examination there were found much advanced secondary manifestations, Dr. Usass came to the conclusion that the infection had taken place much earlier, having been caused probably by her using some syphilitic customers' dirty handkerchiefs. [A similar instance of hard chancre of the upper eyelid was recently communicated by Dr. A. S. Serduekoff, of St. Petersburg (*Vratch*, No. 5, 1890, p. 124), the patient, a nurse, having contracted the disease from an infant suffering from congenital syphilis and gonorrhœal ophthalmia. Dr. A. A. Tchagin (*British Journal of Dermatology*, August, 1889, p. 347) also saw a case of palpebral sclerosis in a laundress who had infected herself through the washing of her syphilitic brother's linen. Professor V. M. Tarnovsky, of St. Petersburg (*ibid*, p. 348), happened to come across two cases of the same kind in midwives who had been attending to syphilitic parturients, and into whose eyes some amniotic water had got during labour (on bursting of the fœtal membranes). In the *Meditzinskoie Obozrenie*, No. 1, 1890, p. 26, Dr. L. N. Mürzin, of Moscow, narrated two cases of hard chancre of the upper eyelid in bootmakers, aged thirty-two and twenty-three respectively, one of whom, while suffering from stye, had been treated by his mates (six or seven in number) with spitting into his eye, the ulcer developing in about three weeks after the last *séance* of the kind. In the other case the chancre appeared shortly after the man had rubbed his eye with a suspicious blanket. Dr. Teplashin, of Glasov (*British Journal of Dermatology*, Oct., 1889, p. 427), described a regular epidemic of palpebral hard chancres (in thirty-four peasants) which had been spread by a syphilitic *znakharka* (a "wise woman"), who had been licking out the patients' eyes with her tongue (on account of some trifling ocular affections). Of 118 cases of extragenital sclerosis observed by Professor A. H. Gay, of Kazan (*vide* his "Handbook on Venereal Diseases," pp. 260-1), four referred to the upper eyelid. Dr. M. S. Tchistiakoff, of St. Petersburg (*Vratch*, No. 5, 1890, p. 124), who has collected 1,164 cases of extragenital hard chancres from various sources (of the number, 897 were mentioned in the *British Journal of Dermatology*, Oct., 1889, p. 426; the remaining being Professor Pospeloff's 198 cases, Porai-Koshitz's forty-eight, and Pavloff's twenty-one), has found that the eyelids and eyes were affected in twenty-seven (2·7 per cent.) cases. The percentage, however, in reality is by far higher. Enough to say that Teplashin's thirty-four palpebral cases were not included by Dr. Tchistiakoff into his statistics. —*Reporter*].

722. *Grzibowski on Extragenital Venereal Sores and Soft Chancre of the Thumb.*—Dr. Piotr I. Grzibowski (pron. *Gjibovskee*; a Polish name), of St. Petersburg, relates the case of a gentleman who came to Professor V. M. Tarnovsky's clinic on account of a large ulcer on his left thumb and two sores of the foreskin. The patient stated that the peneal ulcers had appeared one on the second, and the other on the fifth day—after his last coition. He had had at the time a traumatic erosion of the thumb, which, about the sixth day after the coitus, had become painful, red, and suppurating. Soft chancres both of the prepuce and thumb were diagnosed. To settle the point in regard to the digital lesion, the author inoculated some discharge from it at two spots on the anterior surface of the patient's arm. On the third day the punctures transformed into pustules, and on the fifth into typical soft chancres. It is deemed highly probable that the digital ulcer had been contracted by the patient during his washing out the peneal ones with ordinary water. According to Professor Lang, extragenital soft chancres are very rare. Professor V. M. Tarnovsky and Dr. Zmigrodsky each saw an instance of similar auto-inoculation in men, the ulcer being situated in both of the cases on a finger. [In his valuable "Handbook on Venereal Diseases" (3rd edition, 1888, p. 189), Professor Alexander H. Gay, of Kazan, says that of 2,084 cases of soft chancres seen by him in men, fourteen refer to extragenital ulcers. Of the fourteen, in nine the sore was situated on the mons veneris; in one, on the anterior abdominal wall; one, right cheek; one, forehead; one, anus; and one, inner aspect of the thigh. Of 325 female cases, thirty were extragenital, namely—in fourteen, soft chancres developed in the anus; in ten, on the inner surface of the thigh; in three, on the perineum; in two, on the mons veneris; and one, on the mamma.—*Reporter*.]

VALERIUS IDELSON, M.D.

Dermatology.

RECENT PAPERS.

723. HAUTECŒUR, M.—On "Dermatite polymorphe douloureuse aiguë" (Brocq) and "Hydroaaigu" (Unna). (*Annales de dermatol. et de Syphil.*, Tome i., No. 1, 1890.)

724. **Brocq, Dr.**—On Acne Decalvans. (*Journ. of Cutan. and Genito-Urin. Dis.*, vol. viii., No. 90.)

725. **Brocq, Dr.**—On the Treatment of Folliculitis. (*Ibid.*)

726. **Letzerich, Dr.**—On the Ætiology of Purpura Hæmorrhagica. (*Ibid.*)

727. **Hebra, Von.**—On Lichen Ruber and Lichen Planus. (*Ibid.*)

728. **Senator, Dr.**—On a Combination of Alopecia Areata and Vitiligo. (*Ibid*, No. 91.)

729. **Kneeblatt, Dr.**—On the Curative Effect of Erysipelas in Malignant Tumours. (*Ibid*, No. 92.)

730. **Schirren, Dr.**—On the Treatment of Psoriasis by Aristol. (*Ibid.*)

731. **Brugger, Dr.**—On Tuberculosis Verrucosa Cutis. (*Ibid*, No. 93.)

Art. 723. *Hautecœur on "Dermatite polymorphe douloureuse aiguë" (Brocq) and "Hydro aigu" (Unna).*—The following case is an example of the great difficulty of classing certain vesicular eruptions; it does not follow any of the classic types. A woman, aged thirty-nine, was admitted into St. Louis Hospital on September 6, 1889. She had always enjoyed fairly good health, though subject to migraines, and rather "nervous." During August, up to the 28th, her health was perfect; but on that morning, she felt some prickling sensations, and found that her body was covered with papules (*boutons*). There was no fever, and she went on working for a week, taking two sulphur baths, and two saline draughts, and applying fresh butter on paper to her skin. The vesicles opened, and the skin was much inflamed; hence she sought admission on the tenth day. The eruption occupied chiefly the upper and lower limbs, but some scattered elements were found everywhere (face, neck, and scalp). They are found in all stages on the arms, they begin by a rounded elevation, the size of a pin's head, white in the centre, rosy at the margin; on piercing this with a needle, it was seen to be a small vesicule containing a very small drop of serous fluid. The vesicule enlarges, either remaining isolated or becoming confluent with several others. At a more advanced degree of evolution, the eruptive element is constituted by a sort of large papule with salient border; the centre, more effaced, is formed by a thin crust, on raising which a moist, rosy, or slightly brownish surface is exposed. The margin forms a rounded collar, more red than the centre. On close obervation, this "collarette" appears to be itself composed of a certain number of very distinct little vesicles, each being surrounded at the periphery by a slight reddish areola, looking, in fact, like a primitive vesicle, but with some modification. The contained liquid is not serous in these epidermal elevations, but turbid, and even purulent. Some had dried up and were crusted over. This collar, then, is not that of typical *herpes iris*, for it is formed of quite distinct vesicles or pustules, few in number, four or six at the most, recalling the *herpetiform impetigo* of Hebra. Some patches thus formed were rounded mostly, some oval, some irregular. Other spots have a different aspect, they are inflamed, their surface is ulcerated, oozing, or covered with a thick yellowish crust; around them is an extended erythematous zone, scattered over with fine vesicles, no doubt due to irritation from rubbing or the dressing applied. Thus, there are two types of lesions: some dry, forming a central yellowish patch, parchment-like, with rosy border; others moist, of livid red colour, having a central, elevated and softish crust, and around them a crown of vesicles and pustules, distinct from each other, and very red. At the summits of these lesions were (here and there) enucleations of various extent. The axillary glands were not swollen. Hardly any eruption existed in the outer surface of the forearm, while the opposite surface was covered with eruptions of all sizes from a pin's head to a franc-piece. Hands: nothing on palmar surface; four or five patches on dorsal surface. Face: here the patches were smaller and not so red. They existed on the scalp, the sternum, below the breasts, on the back, the abdomen, the thighs and legs. The severe prickling and even burning sensations lasted all through. There was slight fever, temperature between 38° C. morning, 38·5° C. evening (100·4° and 101·3° F.). No anaxia, no emaciation, insomnia only in the beginning; urine, normal. Treatment: Absolute milk-diet; arseniate of soda, one centigramme daily; dry cotton-wool and starch dressings at first, then carron-oil applied. Result: A steady cure; the patient rose on the 21st, convalescent, and was discharged five weeks afterwards. Remarks: The diagnosis here was very difficult. The eruption was not due to any medicine, such as bromides; she had taken none. The vesicular and pseudo-bulloses character recalled Duhring's *herpetiform dermatitis*. But the *début*, without nervous symptom, the rapidity of evolution, the healing without pruritus, do not confirm this. If acute forms are granted, it might be one of them. Again, the case resembled, as said above, the *herpetiform impetigo* of Hebra; but the patches were not large enough, and the case ran too mild a course, the eruption also was originally erythemato-vesicular. As to the *herpes iris* of Batemen, the *hydroa vesiculosa* of Bazin, and the various kinds of *polymophous erythmata*, the affection was certainly very like these. But the localisation, different from that of *herpes iris*, the vesicles and daughter vesico-pustules, clear of isolated and taking an executive disposition; finally, the intensity of the local inflammation and the character of the desquamation were different. The latter occurred in large flakes, apparently where there had been no eruption, and this was one of the strangest symptoms. For the present, it seems best to call it "Dermatite polymorphe douloureuse aigué," hydroa aigu (Unna), presenting certain eruptive elements resembling those of herpetiform impetigo.

E. J. Edwardes, M.D.

724. *Brocq on Acne Decalvans.*—The author describes an affection, which is at present being studied in the Hospital St. Louis under this name. The acneic lesions develop at first upon the hairy scalp with their habitual characters; they are confluent or disseminate, situated towards the front, behind the ears, and especially on the summit of the head. Each lesion has a duration of about fifteen days, at first red and accuminate, it then becomes pustular, and finally disappears; at the same time an acne is frequently observed upon other parts of the body—the back for example. This first purely acneic stage of the eruption may continue for a more or less prolonged period, three or four months on the average. To this succeeds a secondary stage, in which true acne lesions are only exceptionally observed, and still the hairs continue to fall more or less abundantly, so that there soon occur veritable alopecia patches, attended sometimes with itching, sometimes with excoriations, with redness, or simply a slight furfuraceous desquamation. The contours of the alopecia

patches (there is always a principal one) are irregular and jagged, the hairy scalp at their *niveau* is smooth, shining, and apparently atrophied.

725. *Brocq on the Treatment of Folliculitis.*—The author recommends Lœwenberg's application for follicular inflammations. The application is absolute alcohol, supersaturated with boric acid. When there is much inflammation, the diseased parts may be bathed twice daily with this lotion, or a few drops poured upon a poultice of potato-starch, which may be applied over the affected surfaces. If, on the contrary, there is but slight inflammation, and a topical application is well supported, a little absorbent cotton may be moistened with the lotion and applied. This is covered with a gutta-percha plaster, and examined from time to time for fear of exciting too much irritation.

726. *Letzerich on the Ætiology of Purpura Hæmorrhagica.*—L. Letzerich (in a *brochure* published by Vogel, at Leipsic, 1889, *Journ. of Cutan. and Genito-Urin. Dis.*, vol. viii., No. 90) details some experiments which prove what was suspected by others—that morbus maculosus is caused by a specific bacillus. The bacilli were found in the hæmorrhagic spots and in the liver; in the latter locality they were especially numerous. They lodge in the divisions of the capillary vessels, and there exercise a chemical influence on the albumin of the blood, changing it into a gelatinous substance which produces disturbances of the circulation leading to extravasation of blood. The author succeeded in obtaining pure cultivations of the bacillus, and produced a hæmorrhagic purpura in rabbits by experimental inoculations.

727. *Von Hebra on Lichen Ruber and Lichen Planus.*—The author considers that Dr. Taylor's paper in the *New York Medical Journal*, of January 5th, 1889, and the Proceedings of the Paris Dermatological Congress have shown that confusion exists in regard to this disease. He does not agree with Dr. Taylor's conclusion that lichen ruber is a distinct morbid entity without a shadow of a relationship with lichen planus. He believes that the cases put in evidence were not cases of lichen ruber accuminatus, and that lichen ruber and lichen planus are forms of one and the same disease, which may appear one after another in the same individual or occur simultaneously. Dr. Taylor, he believes, committed the mistake of confounding lichen ruber with the pitryiasis rubra pilaris of Divergie. He considers that the spontaneous disappearance of the preceding attacks in Dr. Taylor's case shows that it was not a case of lichen ruber. He relates two cases, in one of which, two years after lichen accuminatus had existed, a typical lichen planus appeared; and in the other, twenty years after lichen planus, lichen rubra pilaris developed over the whole body on both sides after an injury.

728. *Senator on a Combination of Alopecia Areata and Vitiligo.*—H. Senator reports the case of a typesetter, thirty-two years of age, who, in addition to signs of lead-poisoning (anæmia, loss of weight, weakness of the arms, neuralgia), had developed alopecia areata a year and half previously, after having suffered severely from headache. The disease had caused, in addition to almost complete baldness, a partial loss of the eyebrows, eyelashes, and the beard; the pubic and axillary hairs were not noticeably affected. At the same time spots of clearly defined vitiligo appeared on the front and back of the neck and on the trunk. No disturbance of sensibility was detected either on the bald regions or on the vitiligo spots.

729. *Kneeblatt on the Curative Effect of Erysipelas in Malignant Tumours.*—Dr. Kneeblatt narrates three cases observed by himself in which the influence of erysipelas in malignant disease is shown. A lymphosarcoma of the tonsil was present in the first case, which, after operation, reappeared within a few months in the glands of the neck, &c. After the occurrence of an erysipelas a few months later, some improvement was observed. An inoculation with Fehleisen's erysipelas cocci was made some time afterwards. The disease appeared two days later, and lasted about a fortnight. Decided improvement was for a time noticeable, but death occurred three months later. The second case was that of a man, aged fifty-two, who suffered from a lymphosarcoma, beginning behind the ear. Within two days of inoculation an erysipelas with bullæ appeared. When it subsided, the growth was gone. Up to the date of the report, the disease had not reappeared. In the third case, that of a girl of twenty-one, lymphadenoma was present on the lower eyelid. Erysipelas of the face occurred, and caused the tumour to be reduced one-half. A second attack of erysipelas occurred, the result of which was its complete disappearance. The disease did not recur.

730. *Schirren on the Treatment of Psoriasis by Aristol.*—Dr. Schirren has observed the effects of aristol in ten cases of psoriasis. Aristol is a thymol iodide, which precipitates as a reddish-brown amorphous powder when a solution of iodide of potassium is added to an alkaline solution of thymol. Aristol has been found harmless, without toxic qualities, and is efficacious in psoriasis, though of slower power than other drugs now employed. It is not a specific against all skin diseases, as it has been vaunted to be in the trade, but has a certain worth in some of them, including psoriasis. Eruptions of various forms of psoriasis, and of long or short duration, are caused to appear under a ten per cent. salve.

731. *Brugger on Tuberculosis Verrucosa Cutis.*—Oscar Brugger narrates the history of a case of this peculiar form of tuberculosis of the skin. The patient, a man aged twenty-two years, had been affected for about eighteen years with numerous abscesses and ulcers on the right leg, which heal after being subjected to curetting, but would again return. The leg was further the seat of papillary growths, which also returned after removal. On admission to the hospital, the limb was found to be enlarged, and the seat of a number of old and new cicatrices, the skin hard, and the subcutaneous tissue resistant. On various parts of the leg, especially over the outer side of the foot, are numerous papillary growths, from one to three centimètres in diameter, and elevated above the level of the skin about half a centimètre. The microscopic examination of the excised growth is detailed at some length, and showed the presence of tubercle bacilli, giant cells, etc. A guinea-pig inoculated with a portion of the papillary excrescence developed, within six weeks, a nodule at the point of introduction of the growth, and died within eight weeks of miliary tuberculosis. The author believes that this is the first case of the kind in which the tuberculous nature of the affection has been proved by means of inoculation.

THE American Dermatological Association will hold its fourteenth annual meeting at Richfield Springs, New York, on September 2nd, 3rd, and 4th.

Laryngology and Otology.

RECENT PAPERS.

732. **Waxham, Dr.**—On the Surgical Treatment of Croup. (*Arch. of Pediatrics*, July, 1890.)

733. **Dawson, Dr. W.**—On Some Points on Tracheotomy. (*Journ. of Amer. Med. Assoc.*, July 12, 1890.)

734. **Marano, Dr. S.**—On Bacteriological Researches as to the Nature of Ozæna. (*Archives de Laryng. et Rhinol.*, April, 1890.)

Art. 732. *Waxham on the Surgical Treatment of Croup.*—In a paper under the above title, Dr. Waxham presented his views on the relative merits of intubation and tracheotomy to the section on laryngology at Nashville, in May last. To those competent to do the operation with delicacy and skill, he recommended intubation in preference to tracheotomy at all ages, under all conditions, and under all circumstances. In support of this advice he fully recorded two hundred and eighty-five cases with one hundred recoveries, or thirty-five per cent. These cases were not selected, the majority of them being among the poor and destitute, where tracheotomy would hardly have been considered. The ages ranged from five months to twenty years, and the operations were not performed early, but as a last resort. The ages ranged between one and fourteen years, there being only one case over the latter age; two hundred out of the two hundred and eighty-five cases were under five years of age. Among those to recover were two infants of nine months, and one of ten months. There were ninety-three cases under three years, with twenty-two recoveries, or 23·76 per cent. There were one hundred and ninety-two cases over the age of three years, with eighty-eight recoveries, or 45·62 per cent.

733. *Dawson on Some Points on Tracheotomy.*—Having discussed the subject of tracheotomy, and quoted the opinions of many authorities on various points, the author lays down the following propositions:—(i) Tracheotomy is our only remedy for foreign bodies, and in case of obstruction from disease where O'Dyer's intubing apparatus cannot be obtained, or in cases where intubing is not practicable. (ii) The incision should be made by transfixion, and then the connective tissue should be treated by a blunt hook or a steel director. (iii) The operation should be performed in the upper or middle third of the trachea. (iv) When the isthmus is hypertrophied or vascular, ligate it on each side, and then cut it in the median line between the ligatures. (v) The best kind of knife to use is a sharp, pointed, curved bistoury for both skin and trachea. In opening the trachea, this knife steadies the tube and dispenses with forceps and hook.

734. *Marano on Bacteriological Researches as to the Nature of Ozæna.*—Dr. Marano conducted his researches in the laboratory directed by Professor de Renzi, at Naples. The secretions examined were taken from ten patients suffering from ozæna, in the clinic of Professor Massei. Microscopical examination of dried specimens showed among detritus of mucus and pus-cells, small bacteria, a few longish bacilli, and many micrococci of various sizes. Among them, however, was constantly to be found a short, thick bacillus, almost always in the form of diploccus, surrounded by a peripheral halo-like capsule. Cultivation-experiments always yielded, with other variable forms, a thick bacillus, almost always in the form of diplococcus and encapsuled, and perfectly like that observed in the dry preparations. This rhino-bacillus is identical with that described by Lœwenberg, who, however, owing to defective methods, did not find the bacillus encapsuled. One of the characters which distinguishes it from other capsuled microbes is a clear zone of whitish colour which appears towards the extremities and towards the middle. The bacilli are disposed variously in chains and masses. All the usual mediums are favourable for culture of this microbe, especially gelatine, and the cultures present distinctive characters. Control-researches were performed with the object of seeing if this bacillus was constant in ozæna alone, or if it accompanied other catarrhal and inflammatory affections of the nasal passages. He examined the secretions from individuals affected with chronic catarrh, and with dry and atrophic forms. He examined, also, normal mucus, and mucus from a case of chronic atrophic rhinitis consecutive to ozæna, as well as from a case of fetid rhinitis consecutive to myxomatous tumours. The result was always negative. The capsuled bacillus of ozæna was always absent. Other questions remain to be solved, such as whether the bacillus is the causative agent of the pathognomonic fetidity, whether it is the cause of the disease, and lastly whether innoculations can produce the disease in all its phases. As to the fetor, M. Marano never found it in pure cultures, but in direct inoculations; about the eighth or ninth day, a stinking odour developed, which, however, was not that of ozæna. Suspecting that the fetor was produced, not by the sole action of the capsuled bacillus, but by its influence combined with that of other normal micro-organisms of the nose, he inoculated a pure culture of capsuled bacilli with a microbe of the nature of staphylococcus. After two days, a fetid odour was present, not identical, however, with that of ozæna, but resembling it. As bearing on the other questions, M. Marano states that inoculations made on dogs and rabbits gave a negative result. He, however, hopes to make further experiments on this point.

Reviews.

Article 735.

PRACTICAL AND SCIENTIFIC PHYSIOGNOMY.*

Though not strictly speaking a medical topic, the so-called science of physiognomy bears so largely on anatomical details that medical men may be excused it they, in common with the outside public, interest themselves in the subject. If the importance of the subject is to be guaged from the size of the two ponderous volumes which are before us, then it ought to take a high rank among the neo-sciences—a pretension which it will be our duty to assign to its proper place. Physiognomy, we are informed, is based on the assumption that the mind is not a faculty, or combination of faculties, located in any particular part of the organism, but that it is inherent to the tissues as a whole; hence that the workings of the mind are to be deduced from the forms and shapes assumed by the features, taking features to include all salient physical characteristics of the body as well as merely of the face. The authoress begins by dividing the face into three zones—chemical, architectural, and mathematical. Why or how the authoress thus divides and sub-divides, we must confess ourselves ignorant, and the perusal of her explanation increases the pre-existing obscurity, for she wanders off into crystallography and discursive remarks on the "localè" (?) and the "rationalè" (?) of the mind in a way that, to the ordinary intellect, is bewildering. This classification is claimed to be one of "the many important discoveries" in this system of physiognomy, and another is the localisation of no less than fifty mental signs of character in the face. Still another is the relation of every mental faculty with a certain physical organ or system of functions. The authoress does not exaggerate in saying that these ideas are entirely original, and the reader will concede that the theories expounding them are elaborately discussed. The authoress' idea of the importance of her subject may be judged from her urging that scientific and practical physiognomy should be a part of the school-education of youth, and, further, that "until the science of physiognomy is understood, government, as a science, cannot go forward." The reader's satisfaction, in escaping from these generalisations, may be compared to that of Stanley's followers on quitting the darkness of the African forest.

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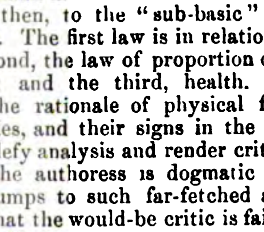
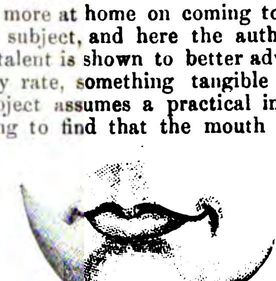
* *Practical and Scientific Physiognomy.* By Mary Olmsted Stanton. Two vols.) F. A. Davis: Philadelphia and London, 1890.

Let us then proceed, in conformity with the authoress' definition, to consider "the material mind in a material body." We must congratulate ourselves *en passant* that speculations in regard to the soul, the hereafter, as well as to sectarian creeds, are not included within the scope of the work. We must be thankful for small mercies!

We come, then, to the "sub-basic" principles of physiognomy. The first law is in relation to form and size; the second, the law of proportion or harmonious development; and the third, health. Chapter V. deals with the rationale of physical functions and mental faculties, and their signs in the face; but the descriptions defy analysis and render criticism a hopeless task. The authoress is dogmatic in her statements, and jumps to such far-fetched and sweeping conclusions that the would-be critic is fain to hang his harp on the willows and be silent.

One feels more at home on coming to the practical part of the subject, and here the authoress' special descriptive talent is shown to better advantage. We have, at any rate, something tangible to deal with, and the subject assumes a practical interest. It is not surprising to find that the mouth affords a rich field for observation. Not only in its bold outlines, but in its most recondite folds and creases, it is made to yield invaluable information as to the character, disposition, and tastes of its owner. Indeed, the indiscretion of the tongue sinks into insignificance beside the secrets unfolded by this somewhat vulgar aperture, to the scientific physiognomist.





The nose, however, is the organ of predilection, and around it cluster whole hosts of associations. If half the discoveries respecting this appendage be founded on fact, a classification of mankind according to the shape, size, and comeliness of the nose must needs prove vastly more satisfactory than any system of competitive examination. The physiognomist can tell thereby, not only what a man *has* thought, but what he is going to think, and—what is infinitely more important—what he is likely to *do* under a given combination of circumstances.

The eye, as an indication of character, naturally takes a foremost position, though it seems to be less reliable than a fixed and permanent feature like the nose. The merest tyro in physiognomical science can form conclusions from the eyes of persons with whose humour and character it is to his interest to become acquainted.

The ear, though less valuable to the observer, nevertheless offers certain points worthy of note. It would be fastidious to take up these indications in detail; but the reader will find in these chapters a large amount of information which is interesting and suggestive. The most admirable feature about this elaborate work consists in the profuseness and excellence of the illustrations, which are provided on a scale and with a generosity we have never before seen equalled. These enable the reader to follow the authoress in her descriptions, though neither these nor anything else would probably place one in a position to grasp the theories based thereon. The work is published in good style, and must prove indispensable to those who are interested in the subject. As expression is, after all, the basis of art, an attentive study of the passions and sentiments, as delineated in the physical outline, ought to prove beneficial to artists both pictorial and dramatic.

ARTICLE 736.

Handbook of Diseases of the Nose and Naso-Pharynx. By J. B. BALL, M.D. (Lond.), M.R.C.P. London: H. K. Lewis, 1890.

A CONCISE and handy little work on diseases of the nose, for the use of general practitioners and others, has long been a desideratum, and we think the hiatus in the literature of this special subjecthas been largely filled by the volume compiled by Dr. James B. Ball. The treatises on the diseases of the nose and naso-pharynx, which have hitherto appeared, are for the most part too bulky to be of much use to the busy practitioner; the latter has not time to refer to long descriptive accounts of diseases when he is in search of information in connection therewith, upon which he is desirous of immediately acting. The usefulness of a treatise is inversely proportional to the rate at which its contents can be mentally absorbed; in other words, plainness of language, conciseness of description, with a sufficiency of detail, are features indispensable to the production of a small work which aims at meeting the requirements of the general practitioner, as far as a special subject is concerned. In the volume before us, within a compass of 243 pages, a surprising amount of information is contained. The opening chapter gives a short account of the anatomy and physiology of the nasal organ, followed by a chapter on general diagnosis. The method of examining the nose by anterior and posterior rhinoscopy is described, and stress righly laid on digital palpation of the naso-pharynx as a means of diagnosis. Some pages are devoted to the various methods of treatment which are useful in nasal and pharyngeal affections. The various forms of rhinitis and post-nasal catarrh are fully dealt with, and attention is drawn to the influence diseased conditions of the pharyngeal bursa has in causing post-nasal catarrh, and the importance of remedying nasal obstruction in order to cure symptoms of post-nasal catarrh. In the author's opinion atrophic rhinitis is not preceded by a hypertrophic stage, as is taught by some authorities. He believes that there is much uncertainty yet as to the early changes in this disease, but he inclines to the view, held by Bosworth, that the atrophic and fœtid stage is often preceded by a purulent rhinitis. In the account of nasal obstruction, attention is called to the pernicious effects of mouth-breathing. In the chapter on reflex nasal neuroses, this subject is fully discussed. The occurrence of various maladies depending upon intranasal irritation is admitted, but much importance is attached to the association of these affections with some general neurotic tendency, to the latter of which their development can be largely attributed. A useful and practical account is given of adenoid vegetations in the naso-pharynx, the author giving full details as to diagnosis and treatment. In practice, Dr. Ball always prefers chloroform as an anæsthetic, and uses Loewenberg's forceps, modified by Woakes. "When chloroformed," says the author, "the patient may lie in the ordinary recumbent position, or the head may be made to hang down over the end of the table." Among the morbid growths, mucous polypi alone come in for a full description, other growths, less frequently met with, being only shortly referred to. In addition to other subjects discussed, there is a chapter on diseases of the accessory sinuses, including a practical account of empyema of the autrum. Preference is given to the alveolar opening and drainage, in the treatment of this condition. The last chapter is devoted to the publication of formulæ, which are found useful in the local treatment of diseases of the nose and naso-pharynx. We have much pleasure in commending this handbook on diseases of the nose, which is sure to become popular among those for whom it was written. Dr. Ball not only knows his subject well, but, what is even more to the point, he can impart his knowledge in plain, concise language.

ARTICLE 737.

Transactions of the American Pediatric Society. Vol. I., 1889. Edited by W. PARRY WATSON, A.M., M.D. Lippincott & Co.

A GREAT variety of topics are treated of in this work of 315 pages, which speaks well for the activity of the recently-formed American Pediatric Society, of which Professor Jacobi, of New York, and Dr. Meigs, of Philadelphia, are the president and first vice-president respectively, notwithstanding that only forty-three members constituted the Society in the Session 1888-89. Thus we have "A Study of some of the Bacteria found in the fæces of Infants affected with Summer Diarrhœa," by Dr. Booker, Maryland (see also Transac. IX., Internat. and Congress, vol. iii); "A Contribution to the Study of Summer Diarrhœa in Infancy," by Dr. J. A. Jeffries, of Boston, also with bacterial investigation; "Aneurism in Early Life," by Professor Jacobi; "Report on Two Years of Experience in the Mechanical Treatment of Gastro-Intestinal Disturbances in Infants," by Professor Seibert, of the New York Polyclinic; "Sclerema Neonatorum," by Dr. Northrup, Pres. N.Y. Path. Soc.); "Two Cases of Congenital Pernicious Icterus," by Professor Hatfield, Chicago; "Acute Peritonitis following Vulvo-vaginal Catarrah in a Girl, aged seven, simulating perforation of the appendix; laparatomy; death," by Professor Huber; "General Subcutaneous Emphysema," by Professor Earle, of Chicago; "The Apparent Physical Paradox involved in the Re-expansion of a Collapsed Lung while a free opening remains in the Pleural Sac," by Dr. O'Dwyer, New York (see abstract elsewhere in this journal);

"The Artificial Feeding of Infants," by Dr. A. V. Meigs, of Philadelphia; "Recent Improvements in Infant-Feeding," by Professor Lewis Smith (Bellevue Hospital, N.Y.); "Janiceps Asymmetros," by Dr. A. Caille, N.Y.; "Double Empyema," by Dr. Huber, &c., &c.

Dr. Meigs adheres to his statement—first made more than seven years ago—that human milk never contains more than about one per cent. of casein, all higher estimates, ancient and modern, being based on incorrect analysis. In using cow's milk, therefore, he dilutes the milk, and adds cream, sugar, and lime-water. The properties of cream is ingeniously obtained, cream in towns being a luxury, and usually acid. One quart of good ordinary milk is placed in a tall vessel (with a hole half-way stopped with a cork), and allowed to stand three hours; the upper half is then allowed to flow off by withdrawing the cork; this half contains nearly all the cream. A young infant receives of this three tablespoonfuls, together with two of lime-water, and three of sugar-water (eighteen drachms of milk-sugar in a pint of water). This makes four ounces. Or the sugar, three drachms and three-eighths, may be added in powder, and the water separately. Rotch thinks there is too much lime-water in the above, and suggests one-sixteenth of the whole as enough. If the child can take eight ounces, double quantities are mixed. The hole in the side of the milk-vessel is not essential; half the milk can be gently poured off the rest.

Artificial foods are strongly condemned by most of the writers, especially by Dr. Jeffries, who also advocated the uniform sterilization of milk, easily, but seldom done.

Dr. Caillé strongly urges an individual prophylactic treatment in diphtheria epidemics, viz., that parents should keep the teeth, nose, and mouth of each child in good order by antiseptics, stopping carious teeth, &c., so that no nidus may exist for the diphtheritic virus. This is an idea worthy of attention, and already taken up by Dr. Edson, of the Bureau of Contagious Diseases (*Johaussen*, *St. Petersburg Med. Weekly*, No. 37, 1887), and others.

E. J. EDWARDES, M.D.

ARTICLE 738.

A New Theory of Chloroform Syncope, showing how the Anæsthetic ought to be administered. By ROBERT KIRK, M.D. Glasgow: John Menzies & Co. 1890. pp. 58.

IN this little work, Dr. Kirk propounds a theory of the cause of death from chloroform, which differs from the theories hitherto advanced on the subject. This new theory takes its starting-point from the hypothesis that there must be an effect produced by the vapour on the pulmonary mucous membrane. This action Dr. Kirk maintains must be "the ordinary anæsthetic effect of the agent, causing retardation and stagnation of the blood in the vessels, and a diminution of all the processes going on there, attended through reflex action with corresponding results on the systemic circulation." He argues that a sudden withdrawal of this force, as when the patient is allowed to breathe fresh air, will be attended with the same liability to syncope, as would be the sudden removal of a tourniquet from the common iliac artery. This reaction only occurs in the early stages of chloroform administration, for at a later stage the chloroform which has been absorbed into the blood counteracts the effect of the withdrawal of the vapour from the lungs, and as the chloroform in the blood is eliminated slowly, recovery also takes place slowly, and, therefore, safely. Dr. Kirk holds that the sudden withdrawal of the vapour during the first few minutes constitutes the greatest danger of chloroform administration. Once an advanced stage of anæsthesia has been reached, and a certain amount of chloroform has been absorbed into the blood, the dangerous period is passed.

Dr. Kirk brings forward several strong arguments derived from experimental researches and clinical experience in support of his theory. For our own part, we cannot understand how Dr. Kirk can maintain that chloroform is a safe anæsthetic, while admitting that fatal syncope may occur in the early stages by simply withdrawing the chloroform momentarily, and allowing the patient to breathe pure air. Whatever the explanation may be, whether Dr. Kirk's theory, or some other, may ultimately prove to be correct, it is not denied that sudden deaths do occur under chloroform, more especially in the early stages of its administration. That no such danger exists with ether is generally admitted. The moral to be deduced is, surely, to give ether when it is not especially contra-indicated.

J. B. BALL, M.D.

ARTICLE 739.

Mr. Spear's Report to the Local Government Board upon the Prevalence of Diphtheria and Croup in the Registration Sub-District of Pontypridd, and upon the Sanitary Condition and Administration of the Sanitary Areas therein contained. London: Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C. Edinburgh: Adam and Charles Black, 6, North Bridge Street. Dublin: Hodges, Figgis and Co., 104, Grafton Street.

THE sub-district of Pontypridd extends over an area of 32,401 acres, and the estimated population is now about 40,000 persons; it contains both urban and rural authorities, and is in some parts densely populated. The Rural Authority of Pontypridd employs five Medical Officers of Health; the maximum salary is £15 per annum, and the minimum £5. It is not surprising, therefore, to read that one of these gentlemen neglects to fulfil many duties of his office, and, when called upon to report fully upon his district, came to the conclusion that £11 per annum was insufficient payment for his duties, and resigned. Mr. Spear recommends that one Medical Officer of Health be appointed for the whole district, who should have sufficient remuneration to devote time and attention to the sanitary needs of the district, and have appointed a Staff of Inspectors of Nuisances to act under his instructions. Naturally, the district with its hills, vales, and rivers, should be endowed with health; but Mr. Spear's report shows that the greater part of these districts has been converted, by want of good sanitary measures, into such places as are loved by infectious, filth-bygotten diseases. Each of the districts is credited with several deaths from diphtheria and croup, while in some, typhoid fever exists, and in one is passing away. The report tells of houses built in contravention of bye-laws relating to drainage and privy-constructions, privies and cesspools ever flowing into surface-water drains, over unoccupied land, into the back lanes, and even into the very houses in times of floods; it tells of back lanes like quagmires from filth, of houses overcrowded, owing to taking in lodgers, and containing rooms with no fire-places, and otherwise unventilated; it tells of water-supplies defective and intermittent, and generally tells of such a state of sanitary condition which must be prejudicial to the health of the inhabitants, and engender filth-disease.

ARTICLE 740.

A Description of the New Hospital Wings at James Murray's Royal Asylum, Perth. By A. R. URQUHART, M.D., and A. HEITON, F.R.I.B.A.

THIS paper appeared in the *Journal of Mental Science*, April, 1890, and describes the new wards recently added to the asylum, in order to provide better accommodation for the existing patients rather than to enable the directors to admit more patients, although provision is now made for one hundred and twenty-six patients, while formerly ninety-five was a full complement. The original asylum was built sixty-two years ago, and although constructed according to the best sanitary knowledge of that day, it has required repeated alterations to keep it abreast of the times. The latest alterations are well designed to give light, warmth, and fresh air to the inmates. The window space might be thought excessive, but the warming apparatus, which is formed by a continuous two-inch steam-pipe, with a pressure of five pounds of steam on the square inch, is apparently sufficient to maintain a comfortable degree of heat, the average heat in November being fairly constant at between 60° and 62°. The special air-inlets are formed of channels of cement between two joists, and, apparently, deliver cold air at the floor-level; if so, and neither the text nor the plans show otherwise, the feet of the patients must be kept cold. Air-outlets are supplied to each ward and corridor in the shape of 12-in. square tubes; the action of which tubes is increased by a gas-jet being beneath each, and by leading the tubes through the hot-water cistern chamber when possible. The tubes are supplied with an exhaust-ventilator, and are led to the ridge of the roof. They are formed to act as outlets in all weathers if they pass through the hot-water chamber, but, if not, in cold, foggy weather they sometimes act as inlets. Dr. Findlay gives some observations on ventilation and heating, in which he gives the results of clinical and bacteriological examinations of the air; from these the improvements in the new wards are quickly seen. The CO_2, at 5.20 a.m., in the new wards, 0·617 per 1,000, which in the old wards was 0·903; the CO_2 in the outer air, in each case, being 0·393. The description is accompanied with a good plan of the new building, which assists in forming an opinion of the great benefit which the patients will receive from the new wings.

ARTICLE 741.

A Practical Text-book of the Diseases of Women. By ARTHUR H. N. LEWERS, M.D. (Lond.), M.R.C.P. Second Edition. London: H. K. Lewis, 1890.

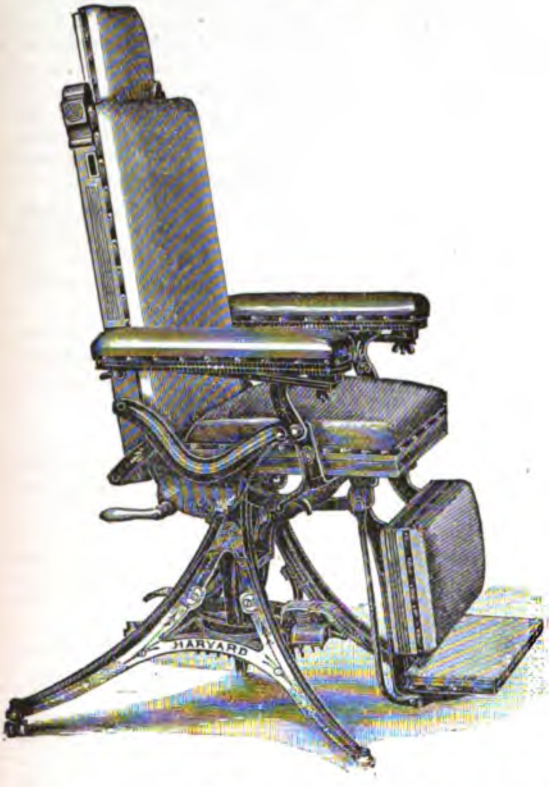
WE are not surprised to find that a second edition of this work has been called for at an early date—not, indeed, that there has been any lack of text-books on the subject, but most of them have been conceived and carried out on too ambitious a plan to fulfil the purposes of a text-book. This work is not altogether free from the blemishes which render the subject a difficult one for students—difficulties which are, perhaps, to some degree inherent to the present condition of our knowledge—but the information is presented in a form which, comparatively speaking, is capable of easy assimilation. In the present edition, several additional illustrative cases have been given. The description of Apostoli's treatment is retained, although the author distinctly regards it as a failure, and the details of Tait's operation for rupture of the perinæum are added. The type is clear, and the illustrations, if somewhat diagrammatic, are fairly numerous. We commend the work more particularly, as being less discursive than the majority, and less devoted to personal "fads" in the way of diagnosis and treatment.

ARTICLE 742.

Edinburgh Medical Journal, July, 1890.—The original communications in this number include the report of a case of rupture of the uterus, in which abdominal section was performed by Dr. Hart. This proceeding had been rendered necessary owing to escape of the fœtus through a large rent in the wall of the uterus; but the remarkable feature of the case is, that no pains were observed, sufficient to account for such an occurrence, at any time during the progress of the labour. The presentation was one of shoulder, and owing to the tonic contraction of the womb turning was considered to be contra-indicated. The actual occurrence of the rupture was not preceded by strong pain, but the fact itself was indubitably evident on palpation of the abdomen, the empty uterus being felt in the hypogastric region. Dr. Hart mentions that he has had experience of five cases of rupture of the uterus, and in all a fatal result was recorded. In the same number of the Journal, in a paper on vaccinia of the eyelids, the author (Dr. Berry) says that he has met with five examples of the condition, and suggests that it is a much more frequent accident than is usually supposed. The importance of the condition is of course in relation to diagnosis, in the way of differentiation between vaccinia and syphilis, the resemblance of the pock to a primary sore being sufficiently confusing. A very interesting account of cancer of the suprarenal capsules and lungs, in which the kidneys were freely moveable, is contributed by Mr. J. Ritchie and Dr. A. Bruce, a special point of interest in the case being the absence of pigmentation in the skin. Mr. Brewis describes the removal of a large fibrocystic tumour from the uterus of a woman forty-three years old. The weight of the mass being twenty and a quarter pounds. Other papers are by Dr. Renton, Dr. Hunter Macknzie, and Messrs. Greig, Chew, Cathcart, and Keiller.

REMARKABLE FECUNDITY.—Dr. De Leon, of Ingersoll, Texas, reports a case of quadruplets, which occurred in his practice in January last. All four children are alive and well. The mother must be accounted a prolific woman. She has been married twice. By her first husband she had six children, twins once. She married her present husband three years ago, and in that period has had eight children, viz. twins twice, quadruplets once. The husband is twenty-six years of age, the wife thirty-six. Dr. De Leon states that they have contracted with Mr. Uffman, of New York, to travel and exhibit themselves in various parts of the States during the present summer. We wish them a prosperous tour.

New Articles.



AT the request of Messrs. Arnold and Sons, agents for the Harvard Co., we have inspected the "Harvard" Physician's and Surgeon's Chair, the object of which has been to combine in a single chair all the movements and positions desirable in the practice of the surgeon, the gynæcologist, the oculist, and the aurist. Evidently such a contrivance is a powerful aid to complete examination, *ergo*, to accurate diagnosis. The chair does not give the impression of being unduly complicated; indeed, when one has been shown the numerous adaptations and adjustments to which it lends itself, one is surprised that it should have been found possible to confer so many movements with such simple mechanism. It is heavy enough to secure perfect stability without rendering its removal an arduous task. In addition, the general appearance of the chair is elegant, and it would be an ornament in any consulting-room. Its advantages can only be thoroughly appreciated on personal inspection, and we would recommend our readers, whose practices render such an adjunct desirable, to take the trouble to have it explained to them.

BRITISH MEDICAL ASSOCIATION.

THE ANNUAL MUSEUM.

THE twenty-third Annual Museum, in connection with the fifty-eight annual meeting of the British Medical Association at Birmingham, was held in Queen's College, when what would have been an exceedingly good exhibition of all that is newest and best in foods and drugs, instruments and books, and much that was interesting and instructive in pathological and other specimens, were marred by the ill-adaptability of the rooms set apart for the purpose. The surgical instruments occupied an advantageous position on the ground floor, while on the second floor and in two galleries aloft were ranged the various exhibits of Section A (food and drugs), some exhibits being relegated to the basement. Taking the sections in their order, we will briefly notice some of the more important exhibits in Section A.

It is, perhaps, hardly necessary to say that the foremost position was allotted to Messrs. Burroughs Wellcome & Co., whose various preparations have long since secured a world-wide reputation for purity and excellence, and to their stall the busy practitioner turns, knowing full well that here he will find all the newest remedies in their best and most approved form. To their list of tabloids they have added, and are continually adding, many new formulæ. Antipyrin, which as an antispyretic has no equal, is sought for in rheumatism, in which it acts as an anodyne for the relief of pain; in hemicrania, neuralgia, sciatica, asthma, and headache, while most satisfactory results have attended its employment as a hæmostatic. Henocque and Belhaut consider it of value in uterine hæmorrhage, and Bokenham in headache, especially in migraine. The new hypnotic, sulphonal, was highly spoken of by Dr. Lauder Brunton in his recent Croonian lectures. It is devoid of any toxic action, and does not depress the heart, like chloral. In simple insomnia, in small doses of ten or fifteen grains, Professor Luca has found it give the desired effect, and its tastelessness renders it a favourite remedy. Saiol (phenyl-salicylate), the use of which is indicated in various kinds of rheumatism, acts in a similar manner to the salicylates of the alkalies, and salicylic acid, without their disadvantages. It is also used in the treatment of diarrhœa, whether infantile or proceeding from typhoid fever. Professor Grätzer and Drs. Creyx and Jarry recommend it as an odourless substitute for iodoform. Iodic hydrarg., the new antiseptic and germicide, far more powerful and less dangerous than corrosive sublimate. As a vaginal wash, it is preferred to the perchloride, being devoid of toxic action. Strophanthus has now a recognised value as a diuretic and cardiac tonic. The Fairchild zymin and pepsine preparations are sufficiently known and appreciated. There were their hydrastia tabloids, reduced iron tabloids, cascara sagrada extract, sugar-coated and of agreeable flavour, ichthyol pills, sugar coated. Nor must we forget the new "Malto-Risine," a solution of castor-oil in Kepler malt-extract, in which the taste is most effectually disguised. There were also shown their salol bougies, valoid fluid extracts (standarised), and other specialities which space will not admit of our referring to at greater length.

Messrs. Allen, Hanbury & Co. were represented by specimens of their new drugs and chemicals, compressed tabellæ (plain and saccharinated), their infant's food of recognised value, exalgine, medicated lozenges, vaporiser cresoline, phenacetine, fluid extracts and apparatus, and accessories for medical and surgical purposes.

Messrs. Corbyn, Stacey & Co.'s exhibit was one of interest, showing the new antiseptic aristol, a new antipyretic methacetin, and the new stomachic and appetiser, orexin; sulphaminol, a new antiseptic powder to take the place of iodoform; liq. cinchonæ rubræ (Corbyn), mixable with distilled water; nasal cylinders of gelatine, and any medicament desired; ear pellets; somnal, a new hypnotic.

Messrs. Christy & Co. displayed samples of their Christra tissue and bandages in place of oiled silk, and of less cost; kola chocolate, for travellers and athletes; ouabain and liquor ouabain, for asthma, whooping-cough, and heart-disease; jumbul seed, for diabetes, and other known preparations.

Messrs. Wyley & Co., of Coventry, had a fine display of their gelatine-coated oval pills, together with single drugs made up into capsule-like form, the colour of each showing through the coating; also compressed hypodermic pellets, antiseptic and compressed pellets, standardised tinctures, glycerine suppositories, &c.

Messrs. Evans, Sons & Co. (Liverpool), among a very varied exhibit, showed their well-known concentrated liquors, for the extemporaneous preparation of medicated syrups; concentrated waters; liquor cascaræ sagradæ dulcis, free from bitter taste; Savarese's capsules of sandal-wood, oil and pure copaiba; medicated pessaries, suppositories, and bougies.

The exhibit of James Woolley and Sons, of Manchester, included the following new and useful preparations:—Liquor santali co. (well borne in cases where other preparations of copaiba disagree); liquor stypticus (Whitehead), an ethereal solution of iodoform; sal catharticus (Woolley), an aperient salt composed of the sulphates of sodium, magnesium and potassium, with small proportions of bromide of potassium and chloride of sodium; sol æthyl nitritis, said to be more stable in composition than the official spiritus ætheris nitrosi; iso-butyl nitris, for angina and asthma; akolethe, a solution of the sedative principles of opium; glycerinum pepsinum acidum, an active and permanent solution of pepsin; liquor papain, liquor podophylli, &c.

Messrs. Schieffelin & Co.'s soluble gelatine-coated pills and granules were shown by W. E. Sucker, 79, Fenchurch-street. Among their newest preparations are those of pil phenacetine et salol and the hydrarg. lanme oxyde, and their well-known pellets.

Messrs. C. J. Hewlett & Son, 40-42, Charlotte-street, E.C., were present with their specialities, which have attained considerable popularity. They included, amongst others, liq. santal flav cum buchu et cubeba, mist pepsinæ co. cum bismutho, the much-used remedy dyspepsia, etc., mist. tussi rub. conc., for allaying for coughs and chronic bronchitis; phosphorised cod-liver oil emulsion, in which the nauseous taste of the oil is said to be completely disguised; liquor arsenici bromat., used with success in epilepsy, chorea, and other diseases of the nervous system; mist. hæmatoxyli aromat. conc., the new remedy for diarrhœa and dysentery; sol. opii purif., the esteemed hypnotic, which produces no unpleasant after-results.

Messrs. Warner & Co. had their usual handsome exhibit of sugar-coated pills; ingluvin, for the sickness of pregnancy; bromo-soda, etc.

Foods and Dietetic and Invalid Preparations were represented by Mellin (food for infants and food-biscuits), Frame Food (soluble extract of the nourishment of wheat-bran, containing over ten per cent. of phosphates), &c. Brand & Co. were rich in their show of invalid delicacies and specialities, as also were Mason and Co. Among other exhibits were Dahl's dyspepsia cakes and Denæyer's peptones and peptonate of iron; Nestlé's food for infants and Swiss milk; Caffyn's Liquor Carnis (uncooked juice of meat or muscle flasma); Carnick's esteemed beef peptinoids and soluble food; Cadbury's cocoa; Hoff's malt-extract.

Messrs. Stern and Co., now so well known in connection with their pumiline essence and pumiline liniment and ointment, have recently added to their preparations a pumiline emulsion. The latest preparation, however, of this firm, and one for which, we believe there is a great future in store, is pepsalia, a combination of various digestive ferments with chloride of sodium plus an excess of free hydrochloric acid. It resembles, in appearance and taste, fine table salt, the place of which it takes on the table of the dyspeptic. It is without doubt a powerful aid to digestion, and we are not surprised to hear it highly spoken of.

Messrs. Seabury & Johnson had a good assortment of their plasters and flexible silk dressings, which are extensively used; also their rubber adhesive and menthol plasters. Hydronaphol is a powerful antiseptic, odourless and non-corrosive.

The Liverpool Lint Co. (Mark Street Mills, Liverpool) had a very extensive display of dressings, bandages, styptic and surgeon's towels, accouchment sheets, &c., which meet with much favour.

IN SECTION B (PATHOLOGY),

Mr. E. Hurry Fenwick showed a series of vesical specimens and urinary calculi; Dr. T. Wardrop Griffith, Leeds, photographs and water-colour sketches of two cases of trophic changes in the hands, of a nature allied to Raynaud's disease; Mr. Jonathan Hutchinson, a number of portraits of disease, &c., taken during the past year; Mr. Vincent Jackson, Wolverhampton, sarcomatous tumours, and series of calculi; Dr. Ernest Jacob, a series of pathological specimens, showing diseased conditions. Cases of vesical calculi, shown by Mr. Bennett May and Mr. Oliver Pemberton. Portraits from the Royal College of Surgeons. Mr. F. A. Southam, of Manchester, showed specimens of morbid growths of bladder, &c.; Dr. George Thin, a chromo-lithograph illustrative of "psilosis" of the tongue; and a number of specimens were exhibited by the Queen's College, Medical Department, showing pathological changes in the heart and large blood-vessels.

SECTION C (ANATOMY AND PHYSIOLOGY)

contained some very interesting exhibits, the most important being a large collection of models of heads (shown by Professor Cunningham and Professor Windle), a series of transverse sections of an adult male body, &c., &c.; Professor Birmingham's casts showed the injected bladder in position in the child.

SECTION D (INSTRUMENTS)

was highly satisfactory. The well-known firms of Weiss, Lynch, Arnold, Down Brothers, Curry and Paxton, Schall, Mayer & Meltzer, Bailey, Ranschke, Salt & Son, Darton, Hockin & Wilson, and others, had extensive displays of every kind of surgical appliances, many of new design and of greatly improved manufacture.

Correspondence.

NUTRITIVE VALUE OF MEAT EXTRACTS.

To the Editor of the LONDON MEDICAL RECORDER.

SIR,—An article in your issue of July 20, under the title "Comparative Nutritive Value of Meat Extracts," contains so severe an attack on beef-teas and similar foods, that we are impelled to ask your permission to say a few words in rejoinder. As we have expended more time, money, and thought in arguing the case for beef-essence as an invalid-food than anyone else in London, we may perhaps be allowed to claim a certain amount of interest in the subject.

During the five years that we have been preparing essences of beef, mutton, veal, and turtle, for medical use, we have been in constant correspondence with members of the medical profession all over the country, who have been using these essences uninterruptedly all that time. Is it to be supposed—as the writer of your article would apparently contend—that these gentlemen, men of science and skilled practitioners as they are, have been working blindfold all these years, imagining results which have not really occurred, testifying to cures never really effected, nourishing their patients on what is not really food? The assertions of your correspondent are no light matter, viewed from this standpoint. They amount to a wholesale charge either of gross incompetence or wilful tergiversation against not one, or two, or a dozen, but thousands of medical men.

The cheap erudition of the demonstration that Liebig's Extract of Meat is not directly nutritious is a *petitio principii*. No scientific writer of any account has for many years fallen into this error, nor does anyone now administer Liebig's as a nutriment. The extent and limits of its usefulness are well defined; it is a nerve-tonic, and claims to be nothing else. Your correspondent makes use, however, of the abundant evidence to this effect in order to discredit a totally different class of goods. Essence of beef, as prepared at our factory, is a clear, transparent jelly; it is the product solely of the best obtainable British beef. The meat is freed of fat and bone with most scrupulous care, and is then digested at a gentle heat in a water bath, without the addition, however, of water or any other substance whatever. We use no carbohydrate or preservative. The "Lion" Essence is the pure juice of the meat, extracted as above described, and preserved in glass—not tin. It is sterilised by prolonged boiling after being sealed, and is a light jelly at all normal temperatures. It is not the case that the salts are lost, changed, or thrown away; nothing is destroyed except the waste fibre of the meat. There is *no other process* by which so much nutritious matter can be extracted.

In November, 1885, Mr. Otto Hehner, F.I.C., F.C.S., read before the Society of Analysts, a paper on Beef Teas, which was subsequently published in *The Analyst* We afterwards learned that our preparations were adopted by Mr. Hehner, without our knowledge, as the standard of comparison. Mr. Hehner says:—"For the estimation of the matters precipitable by alcohol, I dissolved two grammes of the substance in 25 c.c. of water, and added 50 c.c. of strong methylated spirit, allowed the precipitate to settle over-night, poured and drained off the clear liquor next morning, and, without washing, dissolved it in a little hot water, evaporated in a weighed basin, and dried at 100. In an experiment with Nelson's Gelatine, dried at 100 degrees, I found that thus no less than 93·19 per cent. were precipitated, whilst Liebig Extract gave but a faint precipitate, amounting to 5·1 per cent.; my aim being to precipitate as much as possible of the gelatine, and as little as possible of meat extractives and mineral salts." The result of the analysis thus conducted showed a composition of:—

Moisture	92·32
Nitrogen	·79
Alcohol precipitate	1·99
Ash	1·30
Phosphoric acid	·38

For the sake of comparison he calculated the analysis also on the dry materials:—

Nitrogen	10·3
Alcohol precipitate	25·9
Ash	16·9
Phosphoric acid	4·9
Phosphoric acid in ash	29·6

an effective reply to the contention that the salts and albuminoids are lost, at least as far as this particular Essence of Beef is concerned. Mr. Hehner afterwards wrote us: "There is one other point which I may here mention, which cannot be brought out by analysis, yet is a very important factor in judging of such articles, and that is the excellent flavour and colour of your preparations, bespeaking the care which you must have taken in preparing the goods. There is none of the burnt gluey taste and odour noticeable in some of the other preparations which I have analysed. I analysed your preparations because I believed they would furnish me with standards whereby to judge others, and I have in no way been disappointed."

As to the practical use of Essence of Beef in medicine, we should be trespassing unpardonably on your space if we attempted to quote even a small selection of the evidence we have that the substance is really nutritious, and not merely stimulative. Thus Mr. Robert Watson, L.F.P.S., of Rochdale, wrote us recently that in one of his cases, "when all other nourishment (including milk and soda water, beef-tea, mutton-broth, chicken-soup, etc.) was rejected, the Essence was retained, and, humanly speaking, was the means of recovery." Now, as (acording to your correspondent) Essence of Beef is not nutritious at all, the patient ought to have starved.

The fact is, as every physician knows by this time, that Essence of Beef, properly prepared, is a direct food, capable of immediate absorption, even in the most delicate conditions of the stomach, and that it contains every nutritive constituent of fresh meat, including the inosite or muscle sugar, the lactic acid, and the salts. Nothing is lost but the inert gelatine. We shall be very pleased to furnish any of your medical readers with a practical proof of its usefulness by sending a jar for trial free.

Apologising for so long a refutation of a statement which we cannot but regard as misleading and injurious,

Yours obediently,

EDGE BROTHERS.

9, Farringdon Road, London, E.C.

Patents.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37, *Chancery Lane, London, E.C.*]

10,496. Improved stopper to chloroform drop and other medical bottles. WALTER WM. MATTHEWS, 10, New Oxford Street, London.

10,532. Improvements in electro inhalers. EDMOND SAVARY D. ODIARDI and ALFRED THOMPSON, 283, Oxford St. London.

10,876. Improvements in inhalers for the administration of chloroform and other anæsthetics. Charles William Krohne and Henry Frederick Seseman, 37, Chancery Lane, London.

10,928. Improvements in dental impression trays. William Henry Bowater, 128, Colmore Row, Birmingham.

10,960. Improvements in injectors. Frederick John Borland, Ralph Rupert Wood and Walter Carter, 45, Southampton Buildings, London.

11,118. Improvements in abdominal belts. Alice Dutton, 8, Quality Court, London.

11,832. The maufacture of Lewis' artificial limbs. Wm. David Lewes, 14, Gellideg, Merthyr Tydvil.

11,249. Improvements in Pasteurising apparatus. Arthur Regel, 46, Lincoln's Inn Fields, London.

11,336. Improvements in artificial teeth. John Smalley Campbell, 21, Cockspur St., London.

11,532. Improvements in trusses. Henry Mole Colwell, 24, Southampton Buildings, London.

11,655. An improved suction apparatus for cleansing wounds and other purposes. Friedrick Siede, 323, High Holborn, London.

The above specifications may be had of Messrs. Rayner & Cassell, Patent Agents, 37, Chancery Lane, London, W.C., at the prices quoted.

[Should any of our readers desire to take out patents for inventions, either English or Foreign, and require advice upon the subject, the "Patent" Editor will be pleased to give them the benefit of his knowledge and experience. Communications addressed to the "Patent" Editor, *Medical Recorder*, 13, Waterloo Place, Regent St., S.W., will receive prompt attention.]

Miscellany.

Profssor Jolly, of Strassburg, has, we learn, been chosen to fill the chair of Mental and Nervous Diseases in the University of Berlin, rendered vacant by the death of Professor Westphol.

Since 1866, the University of France has conferred two hundred and two degrees on women, chiefly Russians and Roumanians, thirty-five of whom have received the degree of Doctor of Medicine.

Dr. William Gilbert, an Elizabethan worthy and founder of the science of electricity, is to have a memorial raised to his memory in the ancient town of Colchester, which claims the honour of being his birthplace.

Southern Italy is suffering just now from a scarcity of water, and it is feared that the water-supply of the houses cannot much longer hold out. Some of the large towns, such as Naples, appear to be well provided.

There has been established in the University of Rome, in connection with the Anthropological Institute, a laboratory of experimental psychology, which will be under the direction of the well-known psychologist, Dr. Sergi.

The amount available for distribution from the Hospital Sunday Fund Collection reached a total of £41,061. £39,101 was voted to one hundred and thirteen hospitals and fifty-five dispensaries, and £2,050 for surgical appliances.

We regret to announce the death of Sir William Carter Hoffmeister, which occurred at Cowes, on Tuesday, July 29, after a long ilness. He was for many years surgeon to the Queen, the Prince of Wales, and the Royal Family, in the Isle of Wight. Sir William Hoffmeister was in his 73rd year.

Universal Muzzling.—The Yorkshire Veterinary Medical Association, at their recent quarterly meeting, considered the subject of rabies in dogs, and it was decided that the most efficient way of stamping out the disease was by the adoption of the most stringent universal muzzling, together with a period of quarantine for imported animals, and a strict system of registration.

The Turin Academy of Medicine has proposed the following as the theme for the Riberi prize of about £750:—"Researches on the Nature and the Prophylaxis of one or several Infectious Diseases of Man." The essays, which may be either printed or in MS., in Italian, French, or Latin, must be sent in by December 31st, 1891.

The habit of naphtha-intoxication is said to have found its way from Germany to New England. The victims are principally women employed in india-rubber factories. The naphtha is kept in large boilers, and the women open the valves of these receptacles and breathe the fumes, the inhalation producing, it is said, an agreeable form of intoxication.

Mr. Knowsly Thornton has resigned his appointment as surgeon to the Samaritan Hospital. Pressure of private work is his reason. Mr. Meredith gives up out-patients in consequence of Mr Thornton's retirement. This creates a vacancy for an assistant-surgeon. It is possible that other additions may be made to the staff in consequence of the enlarged accommodation afforded by the new building in the Marylebone Road, which is now nearly completed.

After comparing the mortality from phthisis of bachelors, married men, and widowers, MM. Destrée and Gallmaerts have arrived at the conclusion that widowers are very much more subject to the disease than either of the other classes—a statement that holds good for all ages. They also say that widows are more liable than single women to die of the disease. They would ascribe the fact to infection occurring during married life, the disease claiming its second victim some time after the death of the first.

The generally admitted evils of tobacco-smoking may, according to Dr. Gautrelet, of Vichy, be avoided, and both pipe and cigar be indulged in to the full without fear of evil consequences. A piece of cotton wool, steeped in a solution (five to ten per cent.) of pyrogallic acid, inserted in the pipe or cigar-holder, will, according to Gautrelet, neutralise any possible ill-effects of the nicotine; and cirrhosis of the liver, and the minor evils due to over-indulgence in tobacco, will be avoided, and this without in any way detracting from the taste of the tobacco.

A "Caisson" Hospital.—In the June issue of the London Medical Recorder we gave a full account of Dr. Corning's observations on the "Caisson" or "Tunnel" disease, as it came under his notice in the works of the Hudson River Tunnel, New York. According to a report in *Engineering*, Mr. Moir, the engineer for Messrs. Pearson and Sons, of London, who is now in charge of the Hudson Tunnel works, has just constructed a compressed-air hospital for the men employed in the tunnel. The hospital is a cylinder, eighteen feet long by six feet in diameter, constructed of steel plates about half an inch thick, and divided into two compartments by a transverse bulkhead. One of these chambers acts as an air-lock for the other, and both are fitted up with beds. The air pressure is maintained by a pump, a constant supply of fresh air being secured by keeping a pet-cock in the shell of the chamber constantly open, through which the air continually leaks out.

Small-pox is reported to have broken out at Delagoa Bay. Quarantine has been imposed.

British Dental Association.—The annual meeting of the Association will be held at Exeter on the 21st inst. and following two days.

Surgeon T. H. Parke is attached for duty with the 2nd Life Guards, Surgeon-Major G. F. Hume Spry having been placed upon retired pay.

Dr. Benjamin Ward Richardson, F.R.S., has been elected President of the Association of Public Sanitary Inspectors in succession to the late Sir Edwin Chadwick, K.C.B.

The *Lancet* calls attention once again to the incongruity and disadvantages of holding coroner's inquests at taverns. A coroner's court is, at present, only provided by the voluntary action of the local authority. No statutory compulsory powers, we believe, exist to enforce such a provision. Mr. Braxton Hicks, the coroner, on holding an inquest a few days since at the Star and Garter, Battersea, again severely complained (in which the jury concurred) that there was no coroner's court for such an inquiry.

The Royal signature has just been appended to several decrees regulating the municipal laboratories of "Vigilanza Igienica" and of those for the analyses of "aliments and beverages." These laboratories have two sections—one "medico-micrographic," and the other chemical. Both are under the surveillance of the Home Office, which establishes the analytic methods to be employed and the *modus operandi* of the laboratories, while it also undertakes the solution of technical questions.

Mr. John Henry Love, a surgeon, practising at Wolverhampton, recently succumbed to injuries received while engaged in making a *post-mortem* examination in the mortuary in May of this year. While removing the skull-cap he struck the chisel with the sharp end of the hammer instead of with the flat end, and it glanced off and caught his finger. He immediately sucked the wound, but afterwards suffered from the effects of it. The diseased condition extended so that the finger had to be removed. The poison still continued its work, extended up the arm, and ultimately the brain became affected, and death took place on the 7th inst.

Mr. Stevens, the correspondent of the *New York World*, who was the first to reach Stanley on his return journey, in his work, just published, entitled "Scouting for Stanley in East Africa," observes:—"Burroughs, Wellcome & Co., the American chemists, of Snow Hill, London, had kindly fitted out the expedition with a chest of their excellent tabloids. These were always immediately effective in breaking up the fever, as well as in curing the many ailments of the men. One cannot speak too highly of the medicines put up in the compact form of tabloids by this firm. Their extreme portability is not the least of their recommendations to the African traveller. Stanley, in recommending these medicines in his 'Congo and the founding of its Free State,' has earned the gratitude of every man who goes to a tropical country. Their saccharine tabloids are especially valuable, as they have three hundred times the sweetening power of sugar."

Surgeon Parke's Specimens.—There were shown by Surgeon Parke, at the annual meeting of the British Medical Association at Birmingham, in the Queen's College, some interesting exhibits, including the poisoned arrows used by the cannibal dwarfs, in the great Arciveri forest of Central Africa, for warfare and also for killing game. They are entirely made and designed by these pigmies, in native foundries, from crude iron-ore, in parts of the forest never travelled through by the white man, or Arab, before the Emin Pasha Relief Expedition, under Mr. Stanley, 1887-8-9. These arrows are propelled from a small bow with a rettain cane, and will kill a man from fifty to one hundred yards off. The other specimens included a bangle of ivory, made and worn by the inhabitants, male and female, of Mazambou's country, to the south-west corner of the Albert Nyanza; the helmet worn by Surgeon Parke throughout the Expedition; a small bracelet made from shells found on the shores of Albert Nyanza; a charm made from teeth, etc., and arrow-heads, taken from the body of a dead soldier.

Bequests.—Mr. J. J. Cunningham, late of Kingstown, beqeathed £500 to the Mater Misericordiæ Hospital; £500 to St. Vincent's Hospital; £500 to the Hospice for the Dying; £500 to St. Michael's Hospital, Kingstown; £1,000 to Jervis Street Hospital; £200 to the National Lying-in Hospital; £100 to the Hospital for Incurables; £500 to the Blind Asylum, Merrion; £500 to St. Joseph's Hospital for Children; and £200 to St. Vincent's Hospital Convalescent Home.—The late Mrs. Charlotte Mills, of Newbury, bequeathed £100 to the Newbury District Hospital.—Mr. Henry Branston, of Newark, has given £1,000 to the Newark Hospital and Dispensary.—The late Mr. Joseph Orrell, of Atherton, bequeathed £500 to the Bolton Infirmary.—Mr. Thomas Jeans, late of Bristol, beqeathed £25 each to the Royal Hospital for Incurables, the East London Hospital, the Eastern Dispensary, Bath; and the Bath Mineral Waters Hospital.—Mr. Wm. Hodson, late of Wolverhampton, left by his will £200 to the Wolverhampton Eye Infirmary, and £100 to the Hospital for Women, Wolverhampton.—Lady Diana Belcher bequeathed £300 to the Seamen's Hospital Society.—Miss Chippindale, of Tunbridge Wells, has sent a donation of £100 to the Royal Hospital for Diseases of the Chest, City Road.—By the will of the late Mr. J. E. Flindt, of Upper Tulse Hill, £20 each (free of legacy duty) is left to the Royal Hospital for Incurables, the Hospital for Consumption (Brompton), the London Hospital, the Metropolitan Free Hospital, and the City of London Truss Society.—The sum of £3,060 has been left by the late Mr. Thomas Richard Walker, of Doncaster, to the Scholfield Convalescent Fund.—The late Mr. C. Goding, of Knightsbridge, bequeathed £500 each to St. George's, Middlesex, Cancer, and General Lying-in, Hospitals.—Miss Elizabeth Piper, late of Kingston, Wilts, left by her will £500 to the Savernake Cottage Hospital.—Mrs. Symes, late of Gorphwysfa, beqeathed the residue of her personality (upwards of £155,000) to various charitable institutions, amongst which are the Gloucester Infirmary, the Carnarvonshire Infirmary, and the Children's Hospital at Kingsholm, Cloucestershire.—(*Lancet.*)

The London

Medical Recorder.

GREAT BRITAIN & IRELAND.

MEDICAL QUALIFICATIONS.

The number of examining bodies in the United Kingdom which grant degrees and diplomas is twenty. But under the Medical Act, 1886 (except in the case of students who registered before October 1, 1884), every qualification to practice must comprise medicine, surgery, and midwifery; hence those bodies, such as the Royal Colleges, which granted "fragmentary" diplomas, have been obliged to amalgamate with some College of Medicine to comply with the law. These Colleges, therefore, confer at present only the "conjoint" diplomas. Subject to this restriction, the qualifications obtainable from them are as follows:—

1. *Royal College of Physicians of London:* Diplomas of Licentiate, Member, and Fellow.
2. *Royal College of Surgeons of England:* Diplomas of Member and Fellow.
3. *Apothecaries' Society of London:* Licence.
4. *University of Oxford:* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.
5. *University of Cambridge:* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.
6. *University of London:* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
7. *University of Durham:* Licences in Medicine and in Surgery; Degrees of Bachelor in Medicine, and Doctor in Medicine, Bachelor in Surgery, and Master in Surgery.
8. *Victoria University:* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master of Surgery.
9. *Royal College of Physicians of Edinburgh:* Diplomas of Licentiate, Member, and Fellow.
10. *Royal College of Surgeons of Edinburgh:* Diplomas of Licentiate and Fellow.
11. *Faculty of Physicians and Surgeons of Glasgow:* Diplomas of Licentiate and Fellow.
12. *University of Aberdeen:* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
13. *University of Edinburgh:* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
14. *University of Glasgow:* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
15. *University of St. Andrews:* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
16. *King and Queen's College of Physicians in Ireland:* Diplomas of Licentiate, Member, and Fellow, and Licentiate in Midwifery.
17. *Royal College of Surgeons of Ireland:* Diplomas of Licentiate and Fellow, and Diploma in Midwifery.
18. *Apothecaries' Hall of Ireland:* Licence.
19. *University of Dublin:* Diplomas in Medicine, Surgery, and Obstetric Science; Degrees of Bachelor in Medicine, Doctor in Medicine, Bachelor in Surgery, and Master in Surgery, Bachelor in Obstetric Science and Master in Obstetric Science.
20. *Royal University of Ireland:* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor in Surgery, Master in Surgery, Bachelor of Obstetrics, and Master of Obstetrics.

EXAMINATIONS.

As already intimated, the Royal College of Physicians of London and the Royal College of Surgeons of England have instituted a conjoint examination for the conferring of the Licence of the former, and the Membership of the latter, body.

The Apothecaries' Society of London now confers a licence which constitutes a complete qualification in Medicine, Surgery, and Midwifery.

The Royal Colleges of Physicians and Surgeons in Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow, have also instituted a conjoint examination for the conferring of licences.

The King and Queen's College of Physicians in Ireland, and the Royal College of Surgeons of Ireland, have alse instituted a conjoint examination.

The Apothecaries' Hall, Dublin, has also instituted a conjoint examination with the Royal College of Surgeons of Ireland.

The Royal Colleges of Surgeons and the Faculty of Physicians and Surgeons of Glasgow grant licences in Dental Surgery, which are registrable under the Dentists Act.

Certificates and diplomas in State Medicine and Public Health (which are, with one exception, registrable under the Medical Act of 1886) are conferred after examination by the Universities of Oxford, Cambridge, London, Durham, Edinburgh, Glasgow, Aberdeen, and Dublin; by the Royal University of Ireland; by the Royal Colleges of Physicians and Surgeons in London; by the Royal College of Physicians of Edinburgh; by the Faculty of Physicians and Surgeons of Glasgow; and by the King and Queen's College of Physicians in Ireland.

Certain regulations were adopted by the General Medical Council in 1889, and are binding on candidates registered as medical practitioners, or entitled to be so registered, after January 1st,

1890. The new regulations are designed to ensure "the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the Public Health." The Executive Committee of the General Medical Council has power in special cases to admit exceptions to the rules. The regulations are as follows:—(*b*) A period of not less than twelve months shall elapse between the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery, and the examination for a diploma in Sanitary Science, Public Health, or State Medicine. (*c*) Every candidate shall have produced evidence of having attended, after obtaining a registrable qualification, during a period of six months' practical instruction in a laboratory approved of by the body granting the qualification. (*d*) Every candidate shall have produced evidence of having for six months practically studied the duties of outdoor sanitary work under the Medical Officer of Health of a County or large Urban District. [The Council not having at present any means of knowing how far Medical Officers of Health may be able or willing to undertake the education of pupils, this resolution will not at present be insisted on.] (*e*) The examination shall have been conducted by Examiners specially qualified, and shall comprise laboratory work as well as written and oral examination. (*f*) The rules as to study shall not apply to—(1) Medical practitioners registered, or entitled to be registered, on or before January 1st, 1890. (2) Registered medical practitioners who have for a period of three years held the position of Medical Officer of Health to any County or to any Urban District of more than 20,000 inhabitants, or to any entire Rural Sanitary District.

The Royal University of Ireland confers a special diploma in Mental Science. A special certificate in Psychological Medicine is also given by the Medico-Psychological Association.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL AND OTHER BODIES.

The following is a general summary of the conditions required on the part of candidates for examination; but, for further details, our readers must apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognized:—(1.) The possession of a degree in Arts of a University of the United Kingdom or of the Colonies, or of some University recognized by the Medical Council; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the "Recommendations of the General Medical Council." No person is allowed to be registered as a medical student unless he shall have previously passed (at one or more examinations) a preliminary examination in the following subjects of general education: 1. English Language, including Grammar and Composition; 2. Latin, including Grammar, Translation from specified authors, and Translations of easy passages not taken from such authors; 3. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first book of Euclid, with easy questions on the subject-matter of the same; 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics; 5. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any modern language; (*f*) Logic; (*g*) Botany; (*h*) Zoology; (*i*) Elementary Chemistry. The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Every person desirous of being registered as a medical student must apply to the branch registrar of the division of the United Kingdom in which he is residing, according to a form which may be had on application to the several qualifying bodies, medical schools, and hospitals, and must produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and *evidence that he has commenced medical study.*

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the licensing body with which he intends to beome connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As the pupil, for one year, of a legally qualified surgeon holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities; 3. By entering at once at a recognised medical school.

The course of professional study must occupy forty-five months, of which at least three winter and two summer sessions must be passed at a recognised medical school or schools. For the degrees of the Universities (except those of London and the Royal University in Ireland) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a college in connection therewith.

To obtain a degree, diploma, or licence, two examinations at least in professional subjects must be passed. These must include the following subjects: Chemistry (including the principles of the science and the details which bear on the study of Medicine, and the rudiments of Heat, Light, and Electricity); Anatomy; Physiology; Materia Medica and Pharmacy; Pathology; Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics); Surgery (including Surgical Anatomy and Clinical Surgery); Midwifery (including Diseases peculiar to Women and New-born Children); Theory and Practice of Vaccination; Forensic Medicine; Hygiene; and Mental Diseases.

Special arrangements exist at the Universities of Durham and St. Andrews for granting degrees to practitioners of medicine above forty years of age.

Preliminary Examination Modified in 1892.—On and after January 1st, 1892, the preliminary examination in general education which medical students will be required to pass before registration will comprise the following subjects:—*Compulsory Subjects:* (*a*) English Language, Grammar, and Composition, (*b*) Latin, including Grammar and Translation from specified authors and of easy passages from other authors, (*c*) Mathematics, comprising (1) Arithmetic; (2) Algebra to Simple Equations, inclusive; (3) Geometry, the subject-matter of Euclid, Books I., II., III. with easy deductions. *Optional Subjects*, one of the following: Greek, French, German, Italian, and other Modern Language, Logic.

Instruction in the Medical Schools.

The medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, and Mr. Thomas Cooke's School of Anatomy and Surgery.

In the provinces in England there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the College of Medicine of the University of Durham, at Newcastle-on-Tyne; the Medical School affiliated to University College, Bristol; the Medical Faculty of University College, Liverpool (Royal Infirmary School of Medicine); the medical school in connection with the Yorkshire College at Leeds, and that attached to the Firth College in Sheffield. Instruction in all the subjects of the Intermediate in Science and Preliminary Science (1st M.B.). Examination of the University of London is given in the University College of South Wales and Monmouthshire at Cardiff. The University of Cambridge possesses a fully equipped and flourishing medical school, whilst the Medical Faculty of Oxford has had new life infused into it, and provision is now made for the adequate teaching of human anatomy and the other subjects required for the first B.M. examination. Tutorial Instruction and Demonstrations are also given at the Radcliffe Infirmary in Special Regional Anatomy (medical and surgical), methods of Medical Diagnosis and Surgical Manipulation. Practical Pharmacy is taught in the Infirmary and Dispensary. Clinical instruction is given during every term by the Lichfield Lecturers in Clinical Medicine and Surgery. The following hospitals are also recognised by the Royal College of Surgeons for the purpose of professional education:—Bath United Hospital; Bedford General Infirmary; Berkshire Royal Hospital, Reading; Bradford Infirmary; Addenbrooke's Hospital, Cambridge; Derbyshire General Hospital; Devon and Exeter Hospital; Gloucester General Infirmary; Hants County Hospital; Hull Infirmary; Kent and Canterbury Hospital; Leicester Infirmary; Liverpool Northern Hospital and Royal Southern Hospital; Norfolk and Norwich Hospital; Northampton General Infirmary; Nottingham General Hospital; Radcliffe Infirmary, Oxford; Salisbury General Infirmary; Salop Infirmary; Staffordshire General Infirmary; North Staffordshire Infirmary; Wolverhampton and Staffordshire General Hospital; Sussex County Hospital; Worcester Infirmary.

In Scotland, the medical schools in which a complete course of professional education is given are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow; the School of Medicine in Edinburgh; and Anderson's College, St. Mungo's College and Glasgow Royal Infirmary, and the Western School of Medicine, in Glasgow.

In Ireland, the chief medical schools are, the School of Physic in Ireland, the School of Surgery of the Royal College of Surgeons in Ireland, and the Queen's Colleges at Belfast, Cork, and Galway. There are also several medical schools in Dublin: viz., the Carmichael College of Medicine and Surgery, the Catholic University, and the Ledwich School of Anatomy, Medicine, and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses.

PUBLIC HEALTH.

Special courses of lectures on this subject are given at St. Bartholomew's, Charing Cross, Guy's, the Middlesex, and St. Thomas's Hospitals, and at King's and University Colleges. At St. George's Hospital it is included in the course of

Medicine; and at the London, St. Mary's, and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food is given in the hygienic laboratory. In several of the provincial schools, the subject is included in the lectures on Forensic Medicine. In Owens College, Manchester, lectures on hygiene are delivered by Dr. Ransome; in the Bristol Medical School by Mr. D. S. Davies; in the Newcastle College of Medicine by Mr. H. E. Armstrong; and in the Sheffield Medical School by Dr. Sinclair White. In Scotland, also, the instruction in Public Health is given in connection with the lectures on Medical Jurisprudence. In Dublin there is a professorship of Hygiene in the school of the Royal College of Surgeons. In London, instruction in Sanitary Science is also given in the Parkes Museum of Hygiene, Margaret Street, now amalgamated with the Sanitary Institute of Great Britain and in the College of State Medicine, London.

Exhibitions, Scholarships, and Prizes.

ST. BARTHOLOMEW'S.

Foundation and other Prizes.—Two Open Scholarships in Science of the value of £65 each, tenable for one year, will be competed for in September. Candidates must not be more than twenty-five years of age, and must not have entered to the medical or surgical practice of any metropolitan medical school. The subjects of examination are Physics and Chemistry for one, Physiology and Biology for the other.—Two Junior Open Scholarships, one of £130 and one of £50, in the subjects of the Preliminary Scientific Examination of the London University, will be competed for at the same time. Candidates must be under twenty years of age, and must become regular students.—The Jeaffreson Exhibition, of the value of £20, is awarded at entrance after examination in the subjects of general education. It is now an Open Exhibition.—A Senior Scholarship, £50, in Anatomy, Physiology, and Chemistry.—Kirke's Scholarship and Gold Medal in Clinical Medicine, value 40 guineas.—Lawrence Scholarship and Gold Medal, of the value of 40 guineas (founded in 1873 by the family of the late Sir William Lawrence.)—Two Brackenbury Scholarships in Medicine and Surgery, £30 each.—Four Junior Scholarships in the subjects of study of the 1st year; 1st, £40; 2nd, £30; 3rd, £20; 4th, £10. A prize of £15 for Anatomy has been founded by the late Mr. Henry Skynner in memory of his brother; a Scholarship of £50 confined to Cambridge graduates in Arts, by Miss Shuter, in memory of her brother, formerly assistant surgeon to St. Bartholomew's Hospital; and a prize of £10 10s. by Sir F. A. Burrows, Bart., in memory of his father, Sir George Burrows.

CHARING CROSS.

Two Entrance Scholarships, of the value of 100 guineas and 50 guineas respectively, are awarded annually at the commencement of each winter session after a competitive examination in the following groups of subjects: (1) English, including Language, Literature, History, and Geography; (2) Latin and Greek; (3) French and German; (4) Mathematics, including Arithmetic, Algebra, and Geometery; aud Mechanics, including Statics and Dynamics; (5) Chemistry (Inorganic) and Physics, including Acoustics, Heat, and Electricity; and (6) Animal and vegetable Biology. The value attached to each group of subjects is 1,000 marks. No candidate may offer himself for examination in more than three of the above groups of subjects, the selection of the groups being left entirely to the candidate. The Scholarships will be awarded by the School Committee to the two candidates who, on the report of the examiners, have shown the highest degree of excellence; but no Scholarship will be awarded unless, in the opinion of the examiners, a satisfactory standard has been attained. In the first four groups the subjects (as regards extent and the authors selected) will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding; in the fifth and sixth, the same as those for the Preliminary Scientific Examination of the same University. Candidates must give notice to the Librarian of their intention to compete, and of the groups in which they offer themselves for examination, on or before Sept. 20th, 1890. The examination will commence at the School on Monday, Sept. 22nd, at 10 A.M. The successful candidates will be required to enter for their complete medical education at Charing-cross Hospital, either immediately or at the commencement of the next following summer session. A Scholarship of the value of 50 guineas is open to students from the University of Oxford who have passed the First M.B. Examination, and to students of the University of Cambridge who have passed the Second M.B. Examination, and who have not entered at any London medical school. Subjects: Anatomy and Phpsiology, including Histology. The examination for this Scholarship, which will be largely practical, will be held on Sept. 22nd and 23rd. Notice to compete must be sent in on or before Saturday, Sept. 20th, 1890. The successful candidate will be required to complete his curriculum at the Charing-cross Hospital.—The Llewellyn Scholarship of £25, for students who have just completed their attendance on lectures; and the Golding

Scholarship of £15, open also to Dental students, for students who have just completed their first year. The Pereira prize of £5 is open to all general students, and is awarded annually for the best Clinical reports. The Governor's Gold Medal is given for excellence in clinical work. Silver and Bronze Medals, or an equivalent in Books, are awarded to the most distinguished students in all classes; and special prizes in the classes of Dental Surgery, Pathology, and Practical Histology. The Medical School has been considerably enlarged, and, in addition to other improvements, new buildings, including Physiological and Pathological Laboratories, Materia Medica Museum, and Anatomical Theatre, have been erected. The existing Dissecting Room and the Chemical Theatre have also been enlarged.

ST. GEORGE'S.

One of £125, open to sons of medical men; two of £50 each, open to all students commencing their medical studies; £90, open to students who have passed the Cambridge First M.B.; £65, open to students who have signed up for or passed the Oxford First M.B., or Cambridge Second M.B.

Prizes.—The William Brown Exhibition of £100 per annum, tenable for two years, open to any perpetual pupil of St. George's who is under twenty-five years of age, and who shall have obtained a diploma or licence entitling him to be registered as a practitioner of medicine or surgery in England within two years previously to the period fixed for the examination (July). The examination is to test the proficiency of the candidate in Medicine, Midwifery, and Surgery, including Ophthalmic Surgery.—The William Brown Exhibition of £40 per annum, tenable for three years, for general fitness for the exercise of the medical profession and for moral conduct, open to perpetual pupils in their fourth year of study.—Sir Charles Clarke's Prize (interest of £200 consols) for good conduct and for clinical work rendered in the service of the hospital; the Brackenbury Prize in Medicine, value £32; the Buckenbury Prize in Surgery, valued £32; the Treasurer's Prize, £10 10s.; the Thomson Medal; the Brodie Prize for Clinical Surgery; the Acland Prize for Clinical Medicine; the Pollock Prize in Physiology; the Henry Charles Johnson Prize in Anatomy; and General Proficiency Prizes, value £10 10s. each, for students of each year.

GUY'S.

Entrance Scholarships in Arts (£131 5s. and £52 10s.). Subjects: Latin, Greek, French, German, and Mathematics.—Entrance Scholarships in Science (£131 5s. and £52 10s.). Subjects: Inorganic Chemistry, Zoology, Botany, and Physics. The examination begins on Thursday, September 25th.—First-year students: First prize £50, second prize £25, for Anatomy, Physiology, and Chemistry; the Arthur Durham prize for Dissection, £5, to first-year students, £15 to those of later years.—For second-year students: First prize £25, second prize £10, for Anatomy, Physiology, and Materia Medica. The Sands Cox Scholarship of £15 (tenable for three years) for Physiology. The Michael Harris prize of £10 for Anatomy.—For third-year students: First prize £25, second prize £10, for Medical and Surgical Anatomy, Midwifery, and Therapeutics. For fourth-year students: First prize £25, second prize £10, for Medicine, Surgery, Midwifery, and Medical Jurisprudence. The Golding Bird prize of £33 for Methods of Diagnosis in Disease.—For senior students: The Treasurer's Gold Medal for Clinical Medicine; the Treasurer's Gold Medal for Clinical Surgery; the Gurney Hoare prize of £25 for Clinical Reports and Commentaries; and the Beaney prize of 30 guineas for Pathology. The Physical Society awards a prize of £5 to the author of the best Essay on a selected subject; a prize of £7 for the best paper read before the Society, and two prizes of £4 to the members who have most distinguished themselves in the debates of the session.

ST. MARY'S.

Scholarships offered for open competition previously to entering at the Medical School.—Entrance Scholarships: The following will be offered for competition on September 25th and 26th, at ten a.m.—One Scholarship in Natural Science, of the value of 100 guineas, open to any gentleman who has not completed a winter session of study at a medical school. Three Scholarships in Natural Science, each of the value of 50 guineas, under the same conditions. One Scholarship of the value of 100 guineas, open to students from Epsom College, being sons of medical men, and who have not completed a winter session of study at a medical school. This Scholarship is not given by competition. Two Scholarships, each of 50 guineas, open to students from the Universities of Oxford, Cambridge, or other University, who have not entered at any London medical school. The examination for the Scholarships will be conducted according to the syllabus of the Preliminary Scientific Examination of London University. In addition to the Open Entrance Scholarships, Class Prizes, and usual Appointments, Scholarships will be offered for competition at the end of each year, open to all pupils. These Scholarships are of the value of £20, £25, and £30, for the first, second, and third years respectively.

MIDDLESEX.

Two Entrance Scholarships of the value of £100 and £60 are offered for competition just before the commencement of each winter session. An Exhibition of £10 10s. is competed for by students at the close of their first winter session. The Hetley Prize of £25 and the Governors' Prize of £21 are open to competition among students at the close of their third year. The subjects of examination are Clinical Medicine, Surgery, &c. The Lyell Gold Medal is awarded annually for proficiency in Surgical Anatomy and Practical Surgery. The Murray Gold Medal and Scholarship, founded in connection with the University of Aberdeen, are awarded every third year to a student of this hospital; it will be next open for competition in May, 1892. Two Broderip Scholarships of the value of £60 and £40 are awarded annually to those students in their fourth year who pass the best examination in Clinical Medicine, Clinical Surgery, and Morbid Anatomy. Valuable prizes are given in each class.

ST. THOMAS'S.

For first-year students: Two Entrance Scholarships in Natural Science of the value of 125 guineas and £60 respectively, open to all first-year students, will be awarded during the first week in October, after an examination in Physics, Chemistry, and either Physiology, Botany, or Zoology, at the option of the candidate; the William Tite Scholarship, the proceeds of £1,000 consols, is awarded each year; also prizes of £20 and £10; summer, £15 and £10. For second-year students: The Peacock Scholarship of £38 10s., and the Musgrove Scholarship of £38 10s., are awarded biennially to the students who shall take the highest place in the first-class list in the examinations at the end of the second winter session; they are tenable for two years, provided the holder obtains a place in the first class in the subsequent examinations; making the winter prizes £38 10s., £20, and £10; summer, £15 and £10; with the dresserships and the clinical clerkships. For Third-year students (winter): Second tenure of Scholarship, £38 10s., and prizes of £20, £15, and £10; summer, £15 and £10. Clinical clerks and dressers are selected according to merit. The Grainger Testimonial Prize of £15 annually is awarded to students for original work in Anatomy and Physiology. The Cheselden Medal for Surgery and Surgical Anatomy, and the Mead Medal for Practical Medicine, are awarded annually to fourth-year students. The Solly Medal, with a prize of from 10 to 20 guineas, will be awarded biennially to a student of the third, fourth, fifth, or sixth year for the best report of surgical cases. The Treasurer's Gold Medal, for general proficiency and good conduct, is awarded annually to a fourth-year student.

UNIVERSITY COLLEGE HOSPITAL.

Three Entrance Exhibitions, of the respective values of £100, £60, and £40 per annum, tenable for one year, are annually awarded, upon examination by printed papers, to gentlemen who are about to commence their first winter attendance in a medical school. The subjects of the examination are—Chemistry, Physics, Botany, and Zoology. The Atkinson Morley Surgical Scholarship of £45, tenable for three years, is annually awarded to the student who, upon examination, is found to possess the greatest proficiency in the Theory and Practice of Surgery. The Sharpey Physiological Scholarship of about £105 per annum. Filliter Exhibition: a prize of £30 is awarded annually, in July, to the most proficient student in the class of Pathological Anatomy. An Atchison Scholarship, value about £55 per annum, tenable for two years. The Cluff Memorial Prize, value about £15, every second year to the most proficient in Anatomy, Physiology, and Chemistry. The Erichsen Prize: a surgeon's operating case of the value of £10 10s., awarded yearly to the student of the class of Practical Surgery who shall most distinguish himself by manipulative skill. The Morris Bursary of £16 a year, tenable for two years.

KING'S COLLEGE AND HOSPITAL.

Two Warneford Scholarships, for the encouragement of previous education, each £25 per annum, for three years; three Additional Scholarships of £25 each per annum, for two years, will be given in October, 1891; and one Warneford Scholarship of £25 per annum at the close of the winter session, for two years, for third year matriculated students. Medical Scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth years; one of £30 for one year, to students of the second and third years; three of £20 for one year, to students of the first year. Daniell Scholarship, open to students, who have worked in the laboratory six months, £20 per annum, for two years. Two Sambrooke Registrarships, of the annual value of £50 each, open to matriculated students who have filled any of the higher appointments at the Hospital. Two Sambrooke Exhibitions, one £60 and one £40, open to all matriculated students at the commencement of their course of study; subjects of examination, Mathematics, Elementary Physics, Inorganic Chemistry, Botany, and Biology. Rabbeth Scholarship, value £20, in July, for the best evidence of early scientific training. Two Science exhibitions, given by the Clothworkers' Company, one of £50 and one of £25 per annum, each tenable two years, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology; open to all candidates under 19 on October 1st, 1891. Inglis Scholarships: two annually, £50 each, for proficiency in Modern History and English Literature. Leathes' Prizes: Interest of £300 applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated medical students. Warneford Prizes: £40 in medals and books, to two matriculated medical students. Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in the several subjects taught in the classes. Two Surgical Clinical Prizes of £3 each for the winter session. Todd Medical Clinical Prize: Bronze Medal and Books, value £4 4s. Jelf Medal, at the Senior Scholarship Examination who is second in order of merit. Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics. Carter Prize: Gold Medal and Books, value £15, for proficiency in Botany. The Carter (English Original Verse), Stephen (English Essay), Trench (Greek Testament), and McCaul (Hebrew) Prizes are open to students of the medical department.

LONDON HOSPITAL.

Twenty scholarships and prizes are offered for competition. 1 and 2. Two Entrance Scholarships, value £75 and £50; examination on September 25th, 26th, and 27th; subjects: Physics, Botany, Zoology, and Inorganic Chemistry. Successful candidates must forthwith become pupils of the hospital and school. 3 and 4. Two Buxton Scholarships, value £30 and £20, open to full students of less than six months' standing: examination on October 1st, 2nd, and 3rd. 5. A Scholarship at the end of the summer session, value £20, to a first year's student; subjects: Human Anatomy and Physiology. 6. A Scholarship, value £25, to a first or second year's student, at the end of the winter session; subjects: Anatomy, Physiology, and Chemistry. 7, 8, 9. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics. 10. The Letheby Prize, value £30, for Chemistry; open to all full students from the end of the second summer session to the end of the fourth year. 11. The Duckworth Nelson Prize, value £10, awarded biennially, at the end of the winter session; subjects: Practical Medicine and Surgery. For the Hospital Scholarships and the Duckworth Nelson Prize, full students of the Hospital are eligible up to the end of their fourth year, with or without a diploma; qualified officers of the Hospital are not eligible. 12. The Hutchinson Prize, value £35, awarded triennially to the author of the best essay on a subject in Clinical Surgery; open to full students of Hospital who have not been registered as medical students more than ten years. 13—18. Six prizes, of the aggregate value of £60, by competition among the Dressers in the out-patient rooms. 19, 20. Two prizes, value £6 and £4, for Dissections, for full students up to the end of the fourth year.

WESTMINSTER.

A Natural Science Entrance Scholarship, value £100; an Entrance Scholarship of £40 a year for two years, and an Entrance Scholarship of £20 a year, tenable for two years; also two Entrance Scholarships, value £20 each, tenable for two years, after examination in Chemistry and Experimental Physics. An Entrance Scholarship, value £20, is offered annually to dental students. Treasurers' Exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first year's men. The President's Scholarship in Anatomy, Histology, and Physiology, value £21, to students of second year (to be styled Assistant-Demonstrator). After end of fourth winter, Prizes of £5 each (books or instruments) in Clinical Medicine and Clinical Surgery. Frederic Bird Medal and Prize, value £14, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth; subjects of examination: Anatomy, Physiology, Histology, Medicine, Surgery, and Midwifery. In most of the classes, Special Prizes are given by the Lecturers; and Certificates of Honour are awarded in each class.

MEDICAL SCHOOL FOR WOMEN.

1. An Entrance Scholarship, value £30, is offered for competition at the end of September in each year. Candidates must have passed a Preliminary Examination in Arts, and the successful candidate must enter on a full course of medical study at the school. 2. The Stuart Mill Scholarship, value £30 a year for four years, is offered to ladies willing to practise in India under the Dufferin Fund; it will be offered for competition some time in September, 1890. 3. The John Byron Bursary, value £20 a year for four years, is offered to ladies requiring assistance for the prosecution of their medical studies. The next award will probably be in 1894. 4. The Society for the Promotion of Christian Knowledge offers valuable Scholarships on certain conditions. 5. The Zenana Medical Mission Society assists ladies who wish to go to India as missionaries. 6. Income of the Helen Prideaux Memorial Fund as a prize every second or third year. 7. Prizes and Certificates of Honour are awarded in each class at the end of the session. The National Association for Supplying Female Medical Aid to the Women of India provides funds for the Jubilee and the Dufferin Scholarship, out of funds collected in England.

Hospital Appointments.

Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For most of the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, eight house-physicians and ten house-surgeons (who must be qualified to practise), and a senior and junior assistant chloroformist, are appointed annually. A resident midwifery assistant and an ophthalmic house-surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the senior assistant-chloroformist, who receives £50. All, except the eight junior house-physicians and house-surgeons, are provided with rooms. The clinical clerks to the medical in-patients, and the clerks to the physician-accoucheur, are chosen from the most diligent students. Clerks and dressers are also selected to attend in the out-patients' rooms, and in the special department and in the *post-mortem* room. Dressers to the surgical in-patients, and the surgical casualty department, are selected, to the number of forty in each year, from the students (of the first year) who pass the best examination in the subjects of the first year. Other in-patient dresserships may be obtained by payment of £10 10s. for three months, or £16 16s. for six months.

At *Charing Cross Hospital*, a medical and a surgical registrar, each with a salary of £40 a year, are appointed for twelve months. Two house-physicians, two house-surgeons, and a resident obstetrical officer are appointed by competitive examination for six months. They are entitled to rooms and commons in the hospital. An electrical assistant is appointed every six months, and receives £12 12s. at the end of his term of office. Clinical clerks and surgeons' dressers, clinical ward clerks, and pathological assistants are appointed for three months. Each student must hold an in-patient clerkship and in-patient dressership, after the second professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistants to the dental surgeon for three months.

At *St. George's Hospital*, house-physicians, house-surgeons, an assistant house-physician, and an assistant house-surgeon, are appointed, half-yearly, from among the perpetual pupils. The house-physicians and house-surgeons are appointed by the weekly board, on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit £50 with the treasurer, which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties. An obstetric assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A curator of the Pathological Museum, and a medical and a surgical registrar, are appointed annually from among the senior pupils, each with a salary of £50. Two assistant medical registrars are appointed every six months by competition. This office must be held before competing for that of assistant house-physician. An assistant surgical registrar is also appointed; this office must be held, alternately with that of ophthalmic assistant, before competing for the office of assistant house-surgeon. Two demonstrators of anatomy and a demonstrator of physiology are appointed annually, each with a salary of £50. Each pupil of the hospital must act as clinical clerk and dresser before a certificate of attendance on hospital practice can be signed.

At *Guy's Hospital* all appointments are given according to the respective merits of the candidates, and without extra payment. There are appointed annually house-physicians, house-surgeons, surgeons' dressers, and medical clinical clerks, for six months; dressers in the Eye Wards, for four months; clinical assistants, assistant-physicians' clerks, assistant-surgeons' dressers, dressers in the surgery, obstetric ward clerks, surgical clinical clerks, assistant-surgeons' clerks, for three months; obstetric residents, *post mortem* clerks, dental surgeon's dressers, aural surgeon's dressers, for two months; obstetric out-patient clerks, six weeks; extern obstetric attendants, one month; also clerks in the Electrical Department. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

At *King's College Hospital*, physician's assistants, house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, five house-physicians, five house-surgeons, and a resident accoucheur, are appointed every six months; a receiving-room officer, and a senior dresser to out-patients every three months. Clinical clerks, surgical dressers, and clinical obstretic clerks are appointed every three months. Every student must act as a clinical clerk for three months in the medical out-patient department, after passing the first College of Surgeons examination. Maternity pupils reside in the hospital every week. Each student must attend at least twenty cases of midwifery; those who have attended one hundred are entitled to a special certificate. Dressers reside and board in the hospital every week. Every student must act as dresser in the surgical out-patient department for at least three months after the end of the first winter session. Three clinical assistants are appointed every three months for the medical ont-patients, and are eligible for re-election. Each receives a salary at the rate of £80 per annum. An unpaid clinical assistant is appointed in the ophthalmic department. A medical registrar and a surgical registrar are appointed annually; each receives £100. An instructor in anæsthetics is appointed annually; and receives £50. Every student must act as a *post mortem* clerk for three months. A dental assistant, prosectors of anatomy, and dressers in the ophthalmic and aural departments are also appointed. The holders of resident appointments are provided with rooms and board.

At *St. Mary's Hospital* three house-physicians and three house-surgeons are appointed for six months each, and two obstetric officers for six months each; all live free of expense in the hospital. All students must act as clinical clerks and dressers for eight months after passing the primary examinations, and after having acted as dressers two months in the casualty department. Demonstrators of anatomy are appointed at salaries of £70, and a junior demonstrator at £50 a year. Two prosectors are appointed annually; each receives a certificate and £5. A demonstratorship in pathological anatomy, value £15, tenable for six months, is given after competitive examination in pathology and morbid anatomy.

At the *Middlesex Hospital*, sixteen resident appointments are open annually to competition among pupils of the hospital. The officers reside and board in the hospital free of expense. There are two casualty house-surgeons appointed annually. Six house-surgeons are appointed every year after examination; they must have a legal qualification. Six resident physicians' assistants are appointed from time to time for six months; they must have a legal qualification or hold a Broderip scholarship. A resident obstetric physician's assistant (qualified to practice) is appointed for six months. Each of the above-mentioned resident officers pays (except the casualty house-surgeon) £10 10s. on appointment. Non-resident physicians' assistants are appointed in the out-patient department. Clinical clerks and dressers are appointed for six months. An obstetric physician's clerk is appointed. In the out-patient department the appointments are: dresser to the assistant surgeon and to the dental surgeon; clerk to the assistant physician; dresser to the ophthalmic surgeon; clerk to the physician of the skin department, to the assistant obstetric physician, and to the surgeon to the throat and ear department. There are also extern and midwifery clerks, and *post mortem* clerks. The appointments are so arranged that every student may, during his course, take both a clerkship and a dressership. Each student must be an out-patient clerk or an out-patient dresser before being eligible to an in-patient clerkship or dressership. No student can be appointed to any office until he has passed the second examination of the examining board in England or its equivalent.

At *St. Thomas's Hospital* a resident assistant physician and a resident assistant surgeon, at a salary of £100 per annum, each with board, are appointed, and may hold office for a term not exceeding three years. Two resident and two non-resident house-physicians, four house-surgeons, two assistant house-surgeons, and a resident accoucheur are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. Two ophthalmic clinical assistants, chosen from qualified students, are appointed for six months, the senior receiving a salary at the rate of £50 per annum, and the junior being provided with commons. The house-physicians, the house-surgeons, the resident accoucheur, and dressers are provided with rooms and commons. Clinical clerks and dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Clinical assistants in the departments for diseases of the skin, throat, and ear are appointed every three months. Obstetric clerks are from time to time appointed; also assistants in the physiological laboratory, prosectors, and assistants to the demonstrator of pathological anatomy. All students have the opportunity of being engaged in the performance of the practical duties in connection with the medical, surgical, obstetrical, ophthalmic, and pathological departments of the hospital. Two hospital registrars are appointed at an annual salary of £100.

In *University College Hospital*, eight house-physicians, six house-surgeons, eight obstetric assistants, out-patient physicians' and surgeons' assistants, clinical clerks, surgeons' dressers, and ophthalmic surgeons' assistants are selected from among the pupils. The house-physicians, the house-surgeons, and the obstetric assistants reside in the hospital, paying for their board.

At the *Westminster Hospital*, a curator of the museum and a pathologist are appointed annually, each with a salary of £50; and a medical and a surgical registrar, each with a salary of £40. Two house-physicians, two house-surgeons, and a resident obstetric assistant are appointed for six months, after examination, and are provided with rooms and commons. The surgeons' dresser of the day is provided with commons at the hospital table. Clinical assistants to the assistant physicians and assistant surgeons, and to the officers in charge of special departments, are appointed from among the senior students. Every student must perform the duties of out-patient dresser for four months; and afterwards hold the office of in-patient dresser for four months, of out-patient clinical clerk for four months, and of in-patient clinical clerk for four months. No student is eligible as in-patient dresser or clinical clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant and two resident dressers are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months, and a resident dresser every three months.

At the *Bristol Royal Infirmary*, a house-physician, house-surgeon, and junior resident medical officer, clinical clerks and dressers, also ophthalmic, obstetric, and pathological clerks are appointed. The dressers reside in the Infirmary in weekly rotation.

At the *Bristol General Hospital*, a house-surgeon, assistant house-surgeon, and physicians' assistant, clinical clerks, dressers, pathological clerks, obstetric and opthalmic clerks are appointed. The dressers reside in the hospital in rotation, free of expense.

In the *Leeds General Infirmary*, house-physicians, house-surgeons, physicians' clerks, surgeons' dressers, ophthalmic and aural surgeons' dressers, gynæcological ward clerks, assistant-physicians' clerks, assistant-surgeons' dressers, dressers in the casualty room, and *post mortem* room clerks are appointed during the year. The house-physicians and surgeons' dressers hold office for six months; the house-surgeons for twelve months; the others for three months. The house-physicians and house-surgeons must have at least one legal qualification. Appointments are also open to students at the Leeds Public Dispensary, and at the West Riding Lunatic Asylum.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are appointed for six months, after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three clinical clerks for each physician, three or more dressers for each surgeon, and two clerks for the Thornton Wards for Diseases of Women are appointed for three months in October, January, and May. *Post mortem* clerks are appointed for six weeks. All students must perform this duty before the schedule for the final examination is signed.

At the *Manchester Royal Infirmary* the following appointments are made:—A surgical registrar, at £100 per annum; a pathological registrar, at £100 per annum; a medical registrar, at £50 per annum; two assistant medical officers, each at £80 per annum; a chloroformist, at £75 per annum. Resident medical officer, two years, £150 per annum; ditto, at Cheadle, one year, £150 per annum; ditto, at Monsall, one year, £250 per annum; resident surgical officer, one year, £150 per annum; four house-surgeons and two house-physicians, a resident assistant at Monsall (salary £100 per annum); and one at Cheadle, each for six months. The house-physicians, house-surgeons, and the resident assistant at Monsall must possess a qualification which can be registered. Four or more clinical clerks are attached to each physician and assistant physician, and four or more dressers to each surgeon and assistant surgeon. Additional clinical clerks are appointed to assist in the departments for diseases of the ear and throat, and to assist the surgical registrar.

In the *Newcastle-on-Tyne Infirmary*, four times in the year, two resident medical assistants, two resident surgical assistants, three non-resident clinical clerks, and sixteen dressers are appointed for three months. An assistant curator of the museum is annually appointed from among the senior students. Assistant demonstrators of anatomy, prosectors for the lecturer on anatomy, assistant physiologists, pathological assistants, assistants to the dental surgeon, and assistants in the Eye Department are also elected. The assistant demonstrators of anatomy receive £5 each; the others are unpaid.

In the *Edinburgh Royal Infirmary*, the appointments are as follows:—(1) Resident physicians and surgeons are appointed for six months, and live in the house free of charge. Candidates must be registered as legally qualified practitioners. (2) Non-resident clerks are also appointed for six months. (3) Clerks and dressers are appointed by the physicians and surgeons. These appointments are open to all students and junior practitioners holding hospital tickets. (4) Assistants in the pathological department are appointed by the pathologists. No fees are paid for any medical or surgical appointment.

In the *Glasgow Royal Infirmary* all appointments are open. There are four physicians' and six surgeons' assistants who board in the hospital, and act in the capacity of house-physicians and house-surgeons. The appointments are made for six months, and are open to students who have completed their curriculum and passed all their examinations except the last, or to gentlemen who have a legal qualification in medicine or surgery, to whom preference will be given. Clerks and dressers are appointed by the visiting physicians and surgeons. From the large number of cases of acute diseases and accidents of varied character received into this hospital, these appointments are numerous and valuable to students. In the Pathological Department assistants are also appointed by the pathologist.

Medical Schools Abroad.

FRANCE.

The following information is based on that given in the Appendix to the minutes of the General Medical Council, than which no more satisfactory account has ever been published. An account is also here given of the Education and Examinations allowed to be taken at the provincial Schools of Medicine:—

THE DEGREE OF DOCTOR OF MEDICINE.

This is the usual qualification for practice in France. The diplomas of Bachelor of Letters and Bachelor of Sciences are required before the commencement of medical study. The following are the most recent regulations for examination in professional subjects for the Doctorate.

There are five Examinations, and the second, third and fifth are divided into two parts. A thesis must also be sustained before the Faculty.

First Examination.—Physics, Chemistry, and Medical Natural History. To this examination Candidates are admitted after one year of professional study (after the fourth trimestrial inscription and before the fifth). If this examination is not passed at latest at the October-November examination, it cannot be again taken till the end of the academic year, and an inscription cannot be reckoned during that year. (The Candidate thus loses a year).

Second Examination. First part.—A dissection (*éliminatoire*). Anatomy and Histology (oral examination).

To this examination the Candidate is admitted three months after the tenth inscription and before the twelfth; after four trimesters of dissection. (That is, at the end of the third Winter Session, and before the fourth Winter Session can be made.) The first stage of this examination is *éliminatoire*, that is, the examination does not proceed if the dissection is not satisfactory. Several hours are allowed for the dissection.

Second part.—Physiology (oral examination). To this examination the Candidate is admitted after the twelfth inscription and before the fourteenth. (That is after the end of the third Summer Session, and before the middle of the fourth Winter.)

Terminal Examinations.—The third, fourth and Fifth Examinations are sub-divisions of examination following the completion of the required period of study. The Candidate is not admitted to the first of these till three months after making the 16th inscription (that is, till the beginning of the fifth Winter). Four years, embracing four Winter and four Summer Sessions (16 inscriptions), constitute the required course of professional study, but the subsequent examinations to be undergone imply a considerably longer period, as afterwards referred to. The course is reckoned as beginning with the Winter Session. There is no prescribed interval between the subdivisions of the terminal examination, but they necessarily occupy a considerable time, and there is then the thesis to sustain. The following is the arrangement of this series of examinations.

Third Examination. First part.—Operations on the dead body (*éliminatoire*); Surgical Pathology (Pathologie externe), Accouchments, Operative Surgery (oral examination). *Second part.*—Medical Pathology (*Pathologie interne*), General Pathology.

Fourth Examination. — Hygiene; Medical Jurisprudence (*médecine légale*); Therapeutics; Materia Medica, and Pharmacology. [The Third and Fourth Examinations, it will be perceived, correspond to our examination in Medicine, Surgery, and Midwifery, less the Clinical part. The Surgery and Midwifery are taken first, and the examination does not proceed (is *éliminatoire*) if the practical operative surgery is not satisfactory.]

Fifth Examination. — *First part.* — Clinical Surgery and Midwifery (*Clinique externe et obstétricale*). *Second part.*—Clinical Medicine (*Clinique interne*); Practical Pathological Anatomy *épreuve pratique d'anatomie pathologique*). [The last part of the terminal examination is thus strictly Clinical, in Surgery, Midwifery, and Medicine, with *sectio cadaveris.*]

Thesis.—The Candidate must finally submit a thesis (printed) on a subject chosen by himself, and, in sustaining it, "must reply to all the questions that may be put to him on the different branches of medical study."

Rejection.—If the Candidate has not passed the First Examination by the beginning of the second Winter Session, he loses a year. as above mentioned. The rejection (*l'ajournement*) is for three months at the other examinations, except in the subject of Operative Surgery, for which the adjournment is for six weeks only. During the period of adjournment, the course of the inscriptions is suspended, thus adding to the duration of study, and the Candidate loses the amount he has paid (30 francs) for the examination. If a Candidate who has entered his name for an examination does not appear, unless for a reason deemed satisfactory, he loses the 30 francs and three months, the course of his inscriptions being suspended.

Expense.—The total cost is 1,360 francs (about £54), half of which is for the required education (16 inscriptions), half for the examinations and the degree. The payments made at each quarterly inscription are: for the inscription, 30 francs; for the library, 2·50; and for the practical courses (*Travaux pratiques*), 15 francs during the first year, 10 during the second and third years, 5 during the fourth year—total, 190 francs for the first year, 170 for each of the second and third years, 150 for the fourth year. Total for education, 680 francs. Each examination, and each part of the second, third, and fifth examinations costs 55 francs, of which 30 are for examination, and 25 for the certificate; for the thesis, 140, being 100 for the examination, 40 for the certificate; for the diploma, 100; total for examinations and diploma, 680 francs. The Candidate has also the expense of printing his thesis, of which he has to lodge with the Secretary of the Faculty 166 copies, if in Paris, 130 if in the provinces. The medium cost of this is estimated at 250 francs (£10). A Secretary to the Faculty has charge of the administration, and communicates with the Minister of Public Instruction. The payments are made to the "Receveur des droits Universitaires," who is nominated by the Minister of Finance.

Education and Examination at the Provincial Schools of France.—The degree is granted by the Government on the certificates of examination by a Faculty of Medicine. The *Faculties of Medicine* of France, besides that of Paris, are those of

Montpellier, Nancy, Bordeaux, Lille, and Lyons. The three latter are "mixed" Faculties of Medicine and Pharmacy. In Paris, Montpellier, and Nancy the "Ecole superieure de Pharmacie" is distinct from the "Faculté de Médecine." The other provincial schools of Medicine and Pharmacy are of three different ranks:—(1) "Ecoles de plein exercice": Algiers, Marseilles, Nancy, and Toulouse; (2) "Ecoles préparatoires réorganisées": Caen, Reims, and Rennes, to which appear recently to have been added Besançon and Rouen; (3) "Ecoles préparatoires non réorganisées": Amiens, Angers, Clermont, Dijon, Grenoble, Limoges, Poitiers, and Tours. There is a school of *Military Medicine* at Lyons for those who wish to enter the medical service of the army; and there are schools of *Naval Medicine* at Brest, Rochefort, and Toulon for those who are to enter the medical and pharmaceutical service of the navy.

In regard to *Education* for the degree of Doctor of Medicine, the whole of the sixteen inscriptions may be taken at any of the Facultés, or at any of the "Ecoles de plein exercice," but only the first twelve inscriptions (first three years of study) can be taken at the "Ecoles préparatoires."

In regard to *Examination* for the degree, there are important distinctions, according to the rank of the school. (1) Before either of the Facultés the whole of the examinations may be taken. The third, fourth, and fifth examinations and the thesis can be taken only at a Faculté; that is, the examinations that follow the completion of the studies. (2) At the "Ecoles de plein exercice" may be taken the first examination and both parts of the second examination; that is, the examination in Physics, Chemistry, and Natural History, the examination in Anatomy, and the examination in Physiology. (3) At the "Ecoles préparatoires réorganisées," the same, except the examination in Physiology. This latter distinction appears to arise from the fact that the fourth year of study cannot be taken at these schools. (4) No part of the examinations for the degree of Doctor of Medicine can be taken at the "Ecoles préparatoires non réorganisées." The students of these schools must proceed to a Faculté to be examined. That they may do at the usual periods; but they may, "without interrupting their course of studies," delay taking the first examination until after the twelfth inscription, and in that case take both parts of the second examination before the thirteenth inscription. That is, the students at these non-examination schools may delay leaving for their first and second examinations until the three years of study allowed at these schools are completed, and then pass also the examinations in Anatomy and Physiology before the fourth Winter Session can begin at some more complete school. But during their studies they are submitted, each semestre, from the second year of study, to examinations, which are taken into account in the examinations for the Doctorate.

Students at those provincial schools at which, as above given, the earlier parts of the examinations may be taken, are not obliged to take these examinations at their school, but may repair to one of the Facultés. These examinations are held once a year for each; in August for the first examination and the second part of the second examination, in April for the first part of the second examination. Candidates rejected at either of these examinations may present themselves for re-examination before a Faculté after three months, during which the course of their inscriptions is suspended. The examinations at the "Ecoles de plein exercice" and "Ecoles préparatoires réorganisées" are conducted by two professors and one assistant professor (agrégé), sent by a Faculté. The emolument of professors and agrégés is derived from salary, not from class-fees. Conducting the examinations is regarded as an important part of the duties of agrégés and professors.

REGULATIONS FOR THE GRADE OF "OFFICIER DE SANTÉ" IN FRANCE.

This is the "license to practise" usually taken by foreign medical men desirous of acquiring the right to follow their profession in France. The holders of the license are nominally subjected to a host of tiresome and humiliating restrictions, and its abolition is seriously contemplated at the present time. As the institution has already withstood several attacks, its disappearance is, however, by no means a foregone conclusion.

PROFESSIONAL STUDY.

Four years of study (16 trimestral inscriptions) are required, the same period of study as that required for the Doctorate; but the whole may be taken at any of the "Ecoles préparatoires." The obligatory *practical courses* are: First year.—In Physics, Chemistry, and Medical Natural History. Second year.—In Anatomy and Physiology. Third year.—In Anatomy, Physiology, and Operative Surgery. Fourth year.—In Anatomy and Operative Surgery. The Hospital stage begins with the fifth inscription. Thus the practical courses, as compared with those for the Doctorate, are an additional course of Dissection (fourth winter), an additional course of Operative Surgery (begun in the third summer session), and an additional year of the Hospital (beginning with the second winter, for the Doctorate not beginning till the third winter); while the omitted courses are those of Histology and Pathological Anatomy.

EXAMINATIONS.

These are of two kinds, the yearly examinations ("Examens de fin d'année") and the examinations at the end of the course of study ("Examens definitifs," or "Examens de réception.").

The *Examens de fin d'année*, conducted by the Professors of the School, are: First year.—In Physics, Chemistry, Natural History, first elements of Anatomy (Osteology and Arthrology). Second year.—Descriptive Anatomy and Physiology. Third year.—Internal Pathology and External Pathology. If the candidate is rejected at an "Examen de fin d'année" in July, he may appear for re-examination in November; if rejected then, he cannot appear for re-examination till the end of the following year, and the course of his inscriptions is suspended. If he does not appear for the July examination, he cannot be received at the November examination without the special permission of the Council of the Faculty. The final examinations, *Examens definitifs*, cannot take place till after the sixteenth inscription, and are taken before the Faculty or the School of the district (circonscription), within which the candidate is to practise as Officier de Santé. They are:—

First Examination.—A Dissection (*éliminatoire*). Anatomy and Physiology (oral examination).

Second Examination.—Practical Operative Surgery (*éliminatoire*). Internal Pathology, External Pathology, Therapeutics and Materia Medica (oral examination).

Third Examination.—Clinical Medicine (*Clinique interne*), Clinical Surgery (*Clinique externe*), and Clinical Midwifery.

At the "Ecoles de plein exercice" and at the "Ecoles préparatoires" these examinations, presided over by a professor of the Faculté, take place in August and April, the latter term exclusively for candidates rejected in August. When held at a Faculté these examinations take place in August and November.

The difference in *cost* from that for the Doctorate is not great. The cost for the necessary education is the same—680 francs. The examinations for the Officiate cost, for each of the three "Examens de fin d'année," 30 francs: for the "Examens de réception," the first, 100 francs, the second and third 110 each (of which 40 in each is for the certificate); the diploma, 100 francs; total for examination and diploma, 510 francs; total for the Officiate, 1,190 francs (about £48), as against 1,360 (about £54) for the Doctorate. The difference is mainly owing to there being no thesis for the Officiate, which adds 140 francs to the cost of the Doctorate, and there is, besides, the printing of the thesis, estimated at 250 francs.

ORDER OF STUDY VIEWED IN RELATION TO THE EXAMINATIONS.

The following is the order of study, "Division des Etudes," now (1889-90) *recommended* by the Faculty of Medicine of Paris, during the required four Winter and four Summer Sessions. The practical courses and Hospital stage are here placed in *italics*. Any differences between the courses for the Doctorate and the Officiate are placed in parenthesis. These are only in the last three years, and only in respect to certain practical courses and the Hospital stage.

FIRST YEAR.

(*a*). *Winter Session.*—Medical Chemistry, Medical Physics, Medical Natural History, *Practical Chemistry*, *Practical Physics*, *Practical Natural History*.

(*b*). *Summer Session.*—The same subjects, and *practical* courses in the same subjects.

SECOND YEAR.

(*a*). *Winter Session.* — Anatomy, Histology, Physiology, Medical Pathology, Surgical Pathology, *Dissection* (for the Officiate, also *Hospital*).

(*b*). *Summer Session.*—Physiology, Histology, Medical Pathology, Surgical Pathology, *Physiology*, *Histology* (for the Officiate, also *Hospital*, but not *Histology*).

THIRD YEAR.

(*a*). *Winter Session.*—Anatony, Histology, Physiology, Pathological Anatomy and Histology, Medical Pathology, Surgical Pathology, Operations and Apparatus, Therapeutics and Materia Medica Pharmacology, Medical and Surgical Cliniques, *Hospital*, *Dissection*, *Histology* (for the Officiate, *not Histology*).

(*b*). *Summer Session.*—Physiology, Histology, Medical Pathology, Surgical Pathology, Therapeutics and Materia Medica, Pharmacology, Pathological Anatomy, Medical and Surgical Cliniques, *Hospital*, *Physiology*, *Histology* (for the Officiate, also *Operative Surgery*, but *not Histology*).

FOURTH YEAR.

(*a*). *Winter Session.*—Medical Pathology, Surgical Pathology, Pathological Anatomy, Pathology and General Therapeutics, Experimental Pathology, Operations and Apparatus, Hygiene, Therapeutics and Materia Medica, Pharmacology, Midwifery and Diseases of Women, Medical Jurisprudence, History of Medicine and Surgery, Medical and Surgical Cliniques, Clinical Midwifery, Special Cliniques, *Hospital*, *Pathological Anatomy* (for the Officiate *Dissection*, but *not Pathological Anatomy*).

(*b*). *Summer Session.*—Pathology aud General Therapeutics, Medical Pathology, Surgical Pathology, Experimental and Comparative Pathology, Therapeutics and Materia Medica, Pharmacology, Hygiene, Medical Jurisprudence, Medical and Surgical Cliniques, Clinical Midwifery, Special Cliniques, Midwifery and Diseases of Women and Children, Pathological Anatomy, *Hospital*, *Operative Surgery*, *Pathological Anatomy* (for the Officiate, *not Pathological Anatomy*).

It must not be inferred from the above list of classes that the student is required to attend them. The practical courses and the Hospital stage are obligatory, but not any of the lecture courses. Moreover, the lectures in no course are given more frequently than thrice a week, and the forenoon is kept clear of lectures to allow of time for Hospital work. It will be observed that the first year is given entirely to Physics, Chemistry, and Natural History, after which the examination in these subjects follows. The examination rule, by which the student cannot make the second of the four years of study until he has passed the examination in these subjects, will be recognised as an effective one for preventing these early studies from encroaching on the time allowed for the subsequent studies. "Natural History" is used as a general term, including Botany as well as Zoology; from the specification of the courses Botany would seem to receive more attention than Zoology. Although Anatomy appears not to begin till the second Winter, the student must pass a satisfactory examination in Osteology before he is allowed to dissect.

English medical men, who wish to take the doctorate, are required to give evidence of having passed an examination in arts and sciences equivalent to the *baccalauréat ès arts et sciences*, and must forward certified copies and translations of their diplomas, duly legalised at the French consulate, to the Minister of Public Instruction at Paris, accompanied by a letter on unlined foolscap setting forth their demand, in the French language. These documents are best sent to the Dean of the particular Faculty, who will usually see that the remaining formalities are fulfilled. In due course permission will be forwarded to the applicant to take up his "inscriptions," including the degree in arts and sciences (*à titre restreint*) which is an indispensable preliminary to registration as a medical student in France. All candidates will, however, be required to pass the examinations for the doctorate or *officiat* in their entirety, and fees will have to be paid. Formerly, great courtesy was manifested towards foreigners in this matter, but the rivalry which exists between French and English practitioners at the watering-places and health-resorts has led to the introduction of a good deal of rigour and exemptions, from any of the examinations are now almost impossible to pass. More drastic measures, even, are contemplated, and under any circumstances the course is, at best, long, tedious, and difficult.

THE HOSPITALS OF PARIS.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8.30 or 9 a.m. The following is a list of these institutions:—

Hôtel Dieu, Parvis Nôtre Dame.—559 beds. *Physicians:* Drs. G. Sée, Empis, Bucquoy, Dumontpallier, Mesnet, and Prout. *Surgeons:* MM. Richet, Tillaux, and Panas. The hospital possesses laboratories for histology, chemistry, and physiology; also a library for the use of the *internes*.

Hôpital de la Charité, 47 Rue Jacob.—516 beds. *Physicians:* Drs. Potain (Clinical Professor), Blachez, Féréol, Laboulbène, Desnos, and Luys. *Surgeons:* MM. Trélat (Clinical Professor) and Desprès. *Obstetric Physician:* M. Budin. The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

Hôpital de la Pitié, 1 Rue Lacépède.—709 beds. *Physicians:* Drs. Jaccoud, Bourcy, Troisier, Audhoui, Hutinel, Lancereaux, and Brouardel. *Surgeons:* MM. Verneuil and Polaillon. *Obstetric Physician:* M. Maygrier.

Hôpital Lariboisière, 2 Rue Ambroise Paré.—704 beds. *Physicians:* Drs. Bouchard, C. Paul, Proust, Siredey, Duguet, Paul, Gouguenheim, and Gérin-Roze. *Surgeons:* MM. Périer, Anger, Berger, Delens (Diseases of the Eye). *Obstetric Physician:* M. Pinard. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larnyx.

Hôpital Saint-Antoine, 184 Faubourg Saint-Antoine.—785 beds. *Physicians:* Drs. Hayem, Tenneson, Tapret, Gingeot, Moutard-Martin, Landrieux, Hanot, and Raymond. *Surgeons:* MM. Marchand and Monod.

Hôpital Necker, 151 Rue de Sèvres.—454 beds. *Physicians:* Drs. Peters, Rigal, Rendu, and Dieulafoy. *Surgeons:* MM. Le Fort and Guyon. The Civiale museum, containing numerous calculi and specimens of disease of the urinary organs, is attached to the hospital.

Hôpital Tenon, Rue de la Chine.—825 beds. *Physicians:* Drs. Straus, Landouzy, Dreyfus-Brisac, Danlos, Cuffer, Moizard, Roques, and Barth. *Surgeons:* MM. Peyrot and Blum. *Obstetric Physician:* Dr. Auvard.

Hôpital Beaujon, 208 Faubourg Saint-Honoré.—432 beds. *Physicians:* Drs. Millard, Guyot, Gombault, and Fernet. *Surgeons:* MM. Léon Labbé, Cruveilhier, and Duplay. *Obstetric Surgeon:* M. Ribemont-Dessaignes. The hospital possesses a library containing 1,500 volumes and a large number of theses.

Hôpital Cochin, 47 Faubourg Saint Jacques.—386 beds. *Physicians:* Drs. Gouraud and Dujardin-Beaumetz. *Surgeon:* M. Th. Anger. *Obstetric Surgeon:* M. Bouilly. An obstetric department is attached to this hospital, but only a limited number of students are admitted to the morning visit.

Hôpital Laennec, 42 Rue de Sèvres.—628 beds. *Physicians:* Drs. Ball, Damaschino, Ferrand, and Cornil. *Surgeon:* M. Nicaise.

Hôpital Bichat, Boulevard Ney.—181 beds. *Physicians:* Drs. Huchard and Lacombe. *Surgeon:* M. Terrier.

Hospice de la Salpetrière, Boulevard de l'Hôpital.—3,171 beds for old persons, and 720 for female lunatics. *Physicians:* Drs. Charcot and Joffroy. *Surgeon:* M. Terrillon. *Physicians to the Lunatic Department:* Drs. Falret, A. Voisin, and J. Voisin. There is a medical library founded and supported by the *internes;* it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system; and MM. Falret and Voisin give courses of mental pathology.

Hospice de Bicêtre.—1,658 beds for old persons, and 640 for male lunatics and epileptics (the latter number includes nearly 340 epileptics and backward children). *Physician:* Dr. Déjerine. *Surgeon:* M. Reclus. *Physicians to the Lunatic Department:* Drs. Charpentier, Deny, Féré, and Bourneville. *Assistant Physician:* M. Chaslin. The library, which was founded in 1865, contains about 2,600 volumes.

Hôpital des Enfants Malades, 149 Rue de Sèvres.—593 beds. *Physicians:* Drs. Grancher, Labric, Simon, Ollivier, and Descroizelles. *Surgeon:* M. de Saint-Germain. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

Hôpital des Enfantes Assistés, 74 Rue Denfert Rochereau.—675 beds. *Physician:* Dr. Sevestre. *Surgeon:* M. Guéniot.

Hôpital Trousseau, 89 Rue de Charenton.—463 beds. *Physicians:* Drs. Legroux, D'Heilly, Cadet de Gassicourt. *Surgeon:* M. Lannelongue.

Hôpital Saint-Louis, 40 Rue Bichat.—1,043 beds; of which 625 are occupied by cases of skin disease, 38 by obstetric, and the rest by surgical cases. *Physicians:* Drs. Quinquaud, Lailler, Vidal, Hallopeau, E. Besnier, and Fournier. *Surgeons:* MM. Péan, Le Dentu, and Lucas-Championnière. *Accoucheur:* M. Bard. General medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. There is a museum containing several hundred models and drawings, illustrating diseases of the skin; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

Hôpital du Midi, 111 Boulevard du Port-Royal.—327 beds, devoted exclusively to the reception of cases of venereal disease. *Physicians:* Drs. Mauriac and Du Castel; *Surgeon:* M. Humbert.

Hôpital de Lourcine, 111 Rue de Lourcine.—243 beds. *Physicians:* Drs. Martineau and Balzer; *Surgeon:* M. Pozzi. Students are admitted to the hospital by special ticket.

Hôpital Andral, 35 Rue des Tournelles.—100 beds. *Physician:* Dr. Debove.

Hôpital Broussais, 96 Rue Didot.—148 beds. Served by two physicians and one surgeon from the Bureau Central.

Maison d'Accouchement, 123 Boulevard du Port-Royal.—402 beds. *Physician:* Dr. Labadie-Lagrave; *Surgeon:* M. Guéniot; *Assistant-Surgeon:* M. Bouilly. The hospital is employed for the education of midwives. Attached to the hospital is also a school of midwifery for students under the direction of M. Pinard.

Clinique d'Accouchements, 89 Rue d'Assas.—130 beds. *Surgeon:* M. Tarnier.

THE COLLEGE OF FRANCE.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., Experimental Medicine, by Dr. Brown-Séquard; General Anatomy, by M. Ranvier; Natural History of Organised Bodies, by M. Marey; Comparative Embryogeny, by M. Balbiani; Organic Chemistry, by M. Berthelot; Mineral Chemistry, by M. Schützenberger. The Histological Laboratory is under the direction of M. Ranvier and M. Malassez, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey and M. François-Franck, is open to persons who enter their names for the purpose with the Secretary of the Faculty of Sciences, and who have a sufficient knowledge of Physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology, but special attention is paid in this laboratory to the phenomena of circulation and motion, and their registration by suitable apparatus.

GERMANY.

GRADUATION IN MEDICINE.

In the German Empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine—namely, those of Berlin, Bonn, Breslau, Erlangen, Freiburg, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

No one can legally practice Medicine in this Empire unless he has passed the Staats-Examen. The law forbids anyone to call himself *Arzt* (physician) unless he have passed the State Board; or Doctor unless he have obtained the degree after examination at some University. The Doctor who has not passed the State Board can hold no professional appointment, nor can he receive payment for his services. The practitioner who is neither doctor nor physician, if any mishap occur through his ignorance, is punished by fine and imprisonment. Most students pass both examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma of any kind can be obtained in Germany without a certificate of general education, obtained after examination at a gymnasium or public school in Greek, Latin, at least one Modern Language besides German, Logic, the Physical Sciences, and Mathematics. A candidate who cannot present this or an equivalent certificate must pass an examination in these subjects.

The number and character of professorial chairs in the Medical Faculties vary much in the different Universities; but in all there are three classes of teachers—professors, extraordinary professors, and *Privat-Docenten.*

The professors are appointed for life, and at the end of thirty years' service can retire on a pension; they receive a fixed salary from the State or University, a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary varies from £120 to £480 annually, and is increased every ten years by the addition of from £20 to £50. The students' fees for the entire course vary in different schools from £36 to £52.

The extraordinary or assistant professors are appointed from among the *Privat-Docenten*. As a rule, their remuneration is derived solely from students' fees, but occasionally a small fixed salary is allowed.

The course of study at the German Universities varies according to the requirements for the particular medical degree, but in no case is it less than three years, whilst at some it extends over four years. The following lectures are the least which will be accepted by any of the University Faculties, and may be taken in whatever order the student may wish. The courses occupy nine-and-a-half months in each year. For one year: Chemistry, six hours weekly; Physics, four hours weekly; Zoology and Comparative Anatomy, three hours weekly; Botany, three hours weekly; Mineralogy and Geology, two hours weekly; Anatomy, Histology, and Preparation of Specimens, ten hours weekly; Physiology and Laboratory Work, eight hours weekly; General Pathology, Pathological Anatomy, and Practical Work, six hours weekly; Pharmacology and Toxicology, two hours weekly: Obstetrics and Gynæcology, with Clinics, three hours weekly; Eye and Ear Clinics, Use of Ophthalmoscope, Operations, four hours weekly; Forensic Medicine, two hours weekly. For two years: Special Pathology and Medical Clinic at an Hospital, ten hours weekly; General and Special Surgery, Hospital Clinics, and Operations, ten hours weekly for one year or five hours weekly for two years. This course may not be taken at the same time as the previous medical course.

REGULATIONS FOR THE STATE EXAMINATION.

The following are the regulations for the German Staats-Examen, as decided by an Order in Council, dated June 2, 1883. They came into force on Dec. 1, 1883.

(1) Permission to practise Medicine within the German Empire may be granted by the following bodies:—(*a*) The central authorities of those confederate States which possess one or more universities—namely, the Universities of the kingdoms of Prussia, Bavaria, Saxony, and Würtemberg, of the Grand Duchies of Baden, Hesse, and Mecklenburg-Schwerin, together with the Universities of the Grand Duchy of Saxony and of the Saxon Duchies; (*b*) The Ministry of Alsace-Lorraine.

(2) Permission to practice is granted to anyone who has passed a complete professional examination.

(3) The examination may be conducted by a medical examining commission in a University of the German Empire. The commission, including the president and secretary, is chosen every year after consultation with the Medical Faculty of the University in which the examinations are to be held.

(4) The examinations commence in November, and are not continued beyond the middle of July in the following year. Applications for admission to the examination are received by the proper authorities up to Nov. 1; delayed applications can only be granted for special reasons. Candidates who complete the prescribed course of medical study at Easter require, in order to be admitted to examination during the current examining year, a special permission, which is only granted under exceptional circumstances. The application for admission to examination must be accompanied by the following documents:—(*a*) Evidence of a full course of instruction at a gymnasium of the German Empire; certificates from a gymnasium outside the Empire are only exceptionally received; (*b*) Evidence of having gone through a course of medical study of at least nine half-years' duration in a University of the German Empire; certificates from foreign universities are recognised, wholly or in part, only in exceptional circumstances; (*c*) Evidence that the candidate has passed the medical preliminary examination (*Verprufung*) in a German University, and has subsequently studied Medicine in a University during at least four half-years; (*d*) Evidence that the candidate has, during at least two complete half-years, been occupied as medical officer (*Praktikant*) in the surgical, medical, and obstetrical wards of a hospital; that he has himself conducted at least two labours in the presence of his teacher as an assistant, and that he has acted as *Praktikant* for a half-year in an ophthalmic hospital; (*e*) A short account of the candidate's life. Within three weeks after receiving permission to present himself, the candidate must apply personally to the President of the Examining Committee, producing his permission and a receipt for the fees. No special notice of this is given to the candidate.

(5) The examination embraces:—(*a*) Anatomy; (*b*) Physiology; (*c*) Pathological Anatomy and General Pathology; (*d*) Surgery and Ophthalmic Surgery; (*e*) Medicine; (*f*) Obstetrics and Gynæcology; (*g*) Hygiene.

(6) The examination in Anatomy includes:—(*a*) A demonstration of the parts contained in one of the principal cavities of the body, or a dissection and demonstration of some region of the trunk or limbs; (*b*) The making and demonstration of an anatomical preparation, to be followed by an examination in Osteology, and by one on the viscera, nerves, or vessels, of a preparation placed before the candidate; (*c*) The making and demonstration of a microscopic preparation, and an examination in Histology.

(7) In the Physiological examination the candidate has to give *vivâ voce* answers to two questions.

(8) In the Pathological examination the candidate must—(*a*) Make a complete examination of at least one of the three principal cavities of the body, and write a report on the same; (*b*) Explain one or more pathological preparations, one at least of which must be microscopic, and also answer a question in general Pathology, and one in Pathological Anatomy.

(9) Each of the divisions (*a*), (*b*), (*c*), and (*g*) of the examination is conducted by one examiner. Not more than four candidates can be examined at the same time in any division.

(10) The Surgical and Ophthalmological examination embraces four parts, three relating to General Surgery and one to Diseases of the Eye.

(11) The Medical Examination is conducted, as regards the clinical portion, on the same plan as the surgical; and the candidate has to answer, in writing, in the presence of an examiner, questions on prescribing, to state the maximum doses of medicinal substances shown to him, and to give oral proof that he has an adequate knowledge of Pharmacy and Toxicology. This portion of the examination may be entrusted to a third examiner. Not more than three candidates can be examined at the same time.

(12) The Obstetric and Gynæcological examination is conducted by two examiners in a public lying-in institution.

(13) In Hygiene, the candidate has to give oral answers to two questions put by one examiner in the presence of the president. Each candidate is examined for not longer than fifteen minutes.

(14) The questions to be put in the Sections 6, (*b*), (*c*), 7, 8 (*a*), 10 (*a*), (*c*), (*d*), and 13 are determined by lot. If necessary, the examiner may put other questions bearing on the subject of examination.

(15) Students of medicine are admitted to the first three and the seventh divisions of the examination; those who have attended or held office in the respective clinics are admitted to the clinical portions.

(16) A special report is made of the result of each division of the examination; with, if the judgment be "insufficient" or "bad," a short statement of the grounds of the decision.

(17) The questions and the patients in each examination are seen by the candidate for the first time at its commencement. As a rule, an interval of not more than eight days comes between two divisions of the examination. Candidates for admission to the examination in Physiology must have passed that in Anatomy; and both these must have been passed before admission to the remaining portions. The order in which these may be taken is determined by the president; but the examination in Obstetrics and Gynæcology must not immediately follow that in Pathology. If a candidate fail in any one of the subjects except Anatomy and Physiology, he may either present himself at once for examination in the other subjects, or defer it until he is again examined in the subject in which he has failed.

The fees for the examinations amount to 200 marks (about £10); namely, Anatomy, 20; Physiology, 12; Pathology, 16; Surgery and Ophthalmology, 57; Medicine, 35; Obstetrics and Gynæcology, 24; Hygiene, 6; Expenses, 30.

UNIVERSITY OF BERLIN.

The conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University in Berlin, are as follows:—

(1) Candidates must have studied medicine at least four years in one or more regularly constituted Universities. In the case of foreigners, Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany. (2) Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion. (3) The candidate has to make application to the Dean, handing in at the same time documents mentioned under (1) and (2). He has then to pass a written and verbal preliminary examination before the Dean before being admitted to the *examen rigorosum*. The verbal examination is generally conducted in German or Latin, and extends to all branches of medicine. At the written examination an extempore essay must be written, without any assistance, in a given time. (4) After the preliminary examination the Dean lays before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. (5) The *examen rigorosum* takes place before five members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners questioning the candidate for a quarter of an hour. No branch of medicine and surgery is excluded. It is generally held in German, but, if necessary, in Latin. If a candidate be rejected, six months must elapse before readmission. (6) After this the candidate must present a German or Latin dissertation. The essay must be entirely original, and the candidate must declare on oath in writing that he has composed it entirely himself. If the manuscript be pronounced good by the Faculty, the candidate will have to get printed, at his own expense (about 85 marks), by a certain printer, a prescribed number of copies. It must consist of

at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief *curriculum vitæ*, and at least three theses approved by the Dean. (7) After this follows the public discussion in the Aula of the University. The discussion has reference both to the dissertation and to the theses. Next, the opponents chosen by the candidate, who must be at least three in number, divide on the subject. Their names must appear on the title-page of the dissertation. Afterwards any one belonging to the University is at liberty to oppose. Both the candidates and the opponents must be dressed in black. The discussion is either in German or in Latin. The Minister of Education may allow the use of another language, and may also dispense with the discussion. (8) After the discussion is ended the oath-taking and promotion of the candidate as a Doctor of Medicine, Surgery, and Midwifery take place. After the ceremony of promotion is completed the Dean delivers the diploma to the newly created Doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 marks) is borne by the candidate. A copy of it is fixed on the black-board of the Faculty, and a certain number of copies are delivered to the Registrar of the University for distribution. Promotion *in absentiâ* can on no account take place. (9) Four hundred and forty Reichmarks (£22) must be paid to the Dean as fees for the degree of Doctor in Medicine, of which 221 marks must be paid on application, and are forfeited after the *examen rigorosum* if the candidate be unsuccessful. The second portion (204 marks for the Faculty and 15 marks for the University library) may be paid either at the same time with the other, or within the period between the *examen rigorosum* and the promotion. In addition, the candidate has to pay the expenses of printing the dissertation and diploma. (10) The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, the dissertation must be delivered ready for printing to the Dean at the first application, and the other business of the Faculty must be such as permits them to proceed at once to the examinations.

AUSTRO-HUNGARIAN EMPIRE.

GRADUATION IN MEDICINE.

The Universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are—Agram (Croatia), Gratz (Styria), Innsbruck (Tyrol), Cracow, Pesth (Hungary), Klausenburg (Hungary), Prague (Bohemia)—which has two Medical Faculties, German and Tschek—and Vienna.

All the Universities are under Government control, and the degree of Doctor of Medicine obtained at any of them alone gives the right to practice medicine in the Empire.

The course of study required of candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire extends over five years, or five winter and five summer terms or *semesters*. The following arrangement is recommended by the Government. (The first, third, fifth, seventh, and ninth are winter *semesters*: the others are summer *semesters*.) 1st *Semester*.—Systematic Anatomy; Experimental Physics; Inorganic Chemistry; General Botany; Dissections. 2nd *Semester*. — Systematic Anatomy (second part); Experimental Physics (second part); Organic Chemistry; Special Botany; Mineralogy; Practical Introduction to Chemistry; Analysis; Practical Introduction to the Use of the Microscope. 3rd *Semester*. — Physiology; Histology; Medical Chemistry; Zoology; Dissections. 4th *Semester*.—Physiology (second part); Embryology; Exercises in Physiology; in Histology; and in Medical Chemistry. 5th *Semester*.—General Pathology and Therapeutics; Pharmacology; Pathological Anatomy; Pathological Histology; *Post mortem* Examinations; Practical Introduction to the Physical Examination of Patients. 6th *Semester*.—Pathological Anatomy (second part); Special Pathology; Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; *Post mortem* Examinations; Exercises in Pathological Histology. 7th *Semester*.—Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgery Pathology; Therapeutics, and Clinic; Diseases of the Eye; Exercises in Surgical Anatomy (Operations). 8th *Semester*.—Internal Diseases; Surgery or Diseases of the Eye; Surgical Operations; (Surgical Anatomy). 9th *Semester*. — Internal Diseases; Surgery; Theory and Practice of Obstetrics and Gynæcology; Forensic Medicine; Exercises in Obstetric Operations); Medico-Legal Exercises. 10th *Semester*.—Clinics of Diseases of Children; of Diseases of the Skin, and of Syphilis; (Obstetrics and Gynæcology); Exercises in Obstetric Operations; (Medico-Legal Exercises). Of the subjects included in brackets, one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

Candidates for the degree of Doctor of Medicine are required to undergo three examinations (*rigorosen*). Before being admitted, the candidate must produce (*a*) his certificate of birth or baptism, and (*b*) evidence of having received a sufficient preliminary education in one of the institutions of the countries comprised in the Empire, or, if he does not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine; (*c*) evidence of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions; (*d*) of having passed, at one of the

Universities of the Empire, three examinations, in Botany, Zoology, and Mineralogy. Before being admitted to the second examination he must produce evidence of having been engaged five years in professional study, and of having studied Clinical Medicine and Clinical Surgery, each during four sessions, and Clinical Ophthalmology and Clinical Midwifery, each during at least one session; and of having passed the first examination.

The First Examination embraces Physics, Chemistry, Anatomy, and Physiology. There is a practical examination in Anatomy and Physiology, and a theoretical Examination in all four subjects.

The Second Examination includes General Pathology and Therapeutics, Pathological Anatomy and Histology (pharmacodynamics, toxicology, and prescribing), and the Pathology and Therapeutics of internal diseases. The candidate is examined practically in Pathological Anatomy (with preparations and on the dead body), and in Medicine (at the bedside); and theoretically in all the subjects.

The Third Examination embraces Surgery, Ophthalmic Surgery, Midwifery and Diseases of Women, and Forensic Medicine. The examinations in Surgery, Ophthalmic Surgery, and Midwifery are practical; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same University. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another University than that at which he has passed the first.

The examinations are public, and are conducted by a president, the regular examiners, extraordinary examiners when required by the number of candidates, the Government commissioner; and at the second and third there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

A candidate is not admitted to the theoretical examination unless he has satisfied the examiners in the practical one. If he fail at the practical examinations, he may present himself again at the end of four months; if again rejected, four months must elapse before he can be again examined. A candidate rejected at the theoretical examination by one examiner only may be re-admitted to examination in the subject in which he is deficient, at the end of two months. If again rejected, he cannot be again examined in less than four months. If rejected at the theoretical examination by more than one examiner, he may reappear a second and third time at intervals of six months. A rejected candidate can, however, be examined a third time, either in practice or in theory, only with the sanction of the Minister of Public Instruction, and the consent of the College of Professors; and if he then fail, he is debarred henceforth from obtaining a degree in medicine in any of the Universities of the Empire.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total fee for the M.D. degree is about £23 of English money.

The General Hospital (*Allgemeines Krankenhaus*), at Vienna, is capable of accommodating 2,000 patients. There are two medical clinics, under Prof. Nothnagel and Kahler; two surgical clinics, one of which is under Professor Billroth; two clinics for Diseases of the Eye, under Professors von Stellway and Fuchs; and three clinics for Obstetrics, two for students being under the charge of Professors Carl Braun-Fernwald and Chrobak, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Chrobak. There are also special clinics for Syphilis, under Professor Neumann; for Laryngoscopy, under Professors von Schrötter and Störk; for Diseases of Children, under Professor Widerhofer; for Psychology, under Professors Meynert and Krafft-Ebing; and for Otology, under Professors J. Gruber and Politzer. A considerable portion of the school is also situated within the hospital: thus there are Pathological Museum and *post mortem* room, under the direction of the Professor of Pathology; the room for medico-legal necropsies, under Professor Hofmann; the Institute for Experimental Pathology, under the direction of Professor Stricker; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Institute and Dissecting Room, under the direction of Professor Toldt and his colleague; the Physiological Institute, where Practical Physiology is carried on under Professor Brücke; the Materia Medica Museum and the Medical Library are outside the hospital, in the New University Building.

The great clinics on Medicine, Surgery, &c., are conducted during the two sessions—from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually from four to eight weeks. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves.

Vienna affords great opportunities for the study of pathological anatomy. There are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day.

Besides the General Hospital, Vienna possesses the Wieden Hospital (600 beds), the Rudolf Hospital (*K. K. Krankenhaus Rudolfstiftung*) (860 beds), the Lunatic Asylum, the General Polyclinic or Dispensary, the Lying-in Hospital, the Leopoldstädt Children's Hospital (90 beds), the Crown Prince Rudolf Children's Hospital (40 beds), St. Joseph's Children's Hospital at Wieden (100 beds), St. Anne's Children's Hospital (100 beds), &c.

SWITZERLAND.

GRADUATION IN MEDICINE.

In Switzerland degrees in Medicine are granted in the Universities of Basle, Berne, Geneva, and Zürich. These degrees do not confer a licence to practise, for which a separate examination is required.

THE SWISS FEDERAL DIPLOMA.

The following are the conditions for obtaining the Swiss Federal diploma in Medicine. Three examinations must be passed. (1) Natural Science, including *vivâ voce* questions in Physics, Chemistry, Botany, Zoology and Comparative Anatomy. For admission to this examination certificates are required of having passed an examination in subjects of general education, of having attended lectures on all the subjects of the examination, and of having worked practically at qualitative and elementary quantitative analysis in a chemical laboratory. (2) Anatomy and Physiology, including practical and *vivâ voce* tests. In the former the candidate must make and explain an anatomical preparation, for which four hours are allowed, and he must give explanations of other preparations which are submitted to him, and answer questions on Anatomy; he must make and explain histological preparations, and write an essay on some subject in Physiology with closed doors. The *vivâ voce* part consists of questions on Anatomy, Histology and Embryology, and Physiology. Before admission to this examination the candidate must have passed the first examination, must have attended lectures on Anatomy, Histology, Embryology, and Physiology, and must have dissected during two sessions, and worked with the microscope. (3) The "Professional" Examination also consists of a practical (including written questions) and a *vivâ voce* part. The following are the subjects of the practical examination:—(1) Morbid Anatomy, including the *post mortem* examination of at least one of the great cavities of the body, with questions thereon, and the demonstration with the microscope of one or more pathological preparations, with questions relative thereto. (2) Pathology and Therapeutics, including the analysis of a case of disease submitted to the candidate, and the composition at the same sitting of a complete history of the disease. Six hours at the outside are allowed for this test. If this is unsatisfactory, a second test of the same kind must be undergone. The candidate has also to examine one or more patients and to answer *vivâ voce* questions on the cases. (3) Surgery and Surgical Anatomy, including tests similar to those just described, with the addition of at least two operations on the dead body, with questions on the anatomy of the parts and on Operative Surgery. (4) Midwifery, including the analysis of an Obstetrical or Gynæcological case, with questions thereon, and the diagnosis on the "dummy" of the various positions of the fœtus, and the performance of one or more obstetrical operations, also on the "dummy," with questions as to prognosis, the theory of instruments, &c. (5) Ophthalmology, including the examination of cases, and *vivâ voce* questions (6) Forensic Medicine and Hygiene, including (*a*) a written essay (analysis and report) on a medico-legal case, which may be fictitious, and on different cases of mental disease; (*b*) a written essay on a subject of hygiene. The oral part of the examination includes questions on General Pathology and Morbid Anatomy, Special Pathology and Therapeutics, including Diseases of Children. Surgery, Midwifery, including Gynæcology, Hygiene, Forensic Medicine, Psychiatry, Materia Medica. The conditions for admission to this examination are the following:—The candidate must have passed the examination in Anatomy and Physiology, or one recognised as equivalent thereto by the Committee of Direction; he must have attended lectures on the following subjects, at least — General Surgery, General Pathology, Morbid Anatomy, Hygiene, Forensic Medicine, and Pharmacology; he must have attended medical practice during at least two sessions, clinical surgery and clinical midwifery for a like period, clinical ophthalmology and clinical psychiatry during one session; he must have gone through a course of surgical operations, a course of obstetrical operations, and a course of *post mortem* examinations. The regulations for the examination for the Swiss Federal diploma in medicine have been given in detail on account of their special interest at the present time for practitioners with British qualifications who may wish to practise their profession in Switzerland. The examinations are held at Bâle, Berne, Geneva, Lausanne, and Zurich. They confer the licence to practise medicine in all parts of the Republic. The fees payable are as follow:—First examination, 20 francs; second, 30 francs; third, 120 francs. Foreigners pay double these fees in the absence of any treaty to the contrary.

BELGIUM.

GRADUATION IN MEDICINE.

Degrees in Medicine are granted by the Universities of Brussels, Ghent, Liege, and Louvain. The degrees, when legalised by a Government commission, give the right of practice in Belgium. The Universities of Brussels and Louvain confer also honorary titles, without licence to practice.

The examinations for the degree of Doctor of Medicine are alike in the four Universities. (1) An examination in Natural Science must be passed before the Faculty of Science. It comprises Chemistry, Physics, Botany, Zoology, Elements of Mineralogy and Geology, Logic, Psychology, and Moral Philosophy (all oral), and Practical Chemistry. This examination may be passed either entire or in two divisions. (2) An examination for candidates in Medicine must be passed, either entire or in two divisions, before the Faculty of Medicine. It comprises Descriptive Anatomy, Histology, Physiology, including Embryology, Elements of Comparative Anatomy, and Materia Medica, with Dissections and Practical Histology. (3) There are three further examinations for the Doctorate: (*a*) an examination (entire or in two divisions) in Medicine, General Therapeutics and Pathology, Pathological Anatomy, Hygiene, and Practical Pathological Histology; (*b*) an examination in Surgery, including Ophthalmic Surgery, Obstetrics, and Forensic Medicine; (*c*) a clinical examination in Medicine, Surgery, and Midwifery, and a practical examination in Regional Anatomy and Operative Surgery.

The total duration of study is seven years. The law, however, only requires that the student shall have attended hospital practice for three years.

Every student, at the beginning of the year, takes out an inscription, for which he pays 15 francs. For the courses required for each of the five examinations a fee of 200 francs is paid. The examination fees are: for the first two examinations, each 40 francs; for each of the three examinations for the doctorate, 80 francs.

UNIVERSITY OF BRUSSELS.—DEGREE FOR FOREIGN PRACTITIONERS.

By the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Residence is not required from such as are unable to absent themselves long by reason of their professional occupations.

Candidates must come in person and have their names inscribed in the books of the University. The fees are: for inscription of name, 215 fr. (£8 12s.); for examination, 315 fr. (£12 12s.); for registration of diploma, 10 fr. (8s.); total, 540 fr. (£22 12s.). The examination consists of three parts. (1) General Therapeutics, including Pharmacodynamics (proportion of doses), special Pathology and Therapeutics of Internal Diseases, General Pathology and Pathological Anatomy. (2) Surgical Pathology, Ophthalmic Surgery, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. Examination at the Hospital of one or two patients under Medical and Surgical Treatment; Examination in Midwifery, consisting in Obstetrical Operations on the mannikin; Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, &c.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

The examinations take place on the first Tuesday in November, December, February, May, and June, and are conducted *vivâ voce.* Candidates are requested to attend at the University at the latest at 2 P.M. on the day preceding the examination for the purpose of paying their fees and depositing their diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English, through the medium of an interpreter, for such candidates as are not familiar with the French language. Most of the examiners, however, speak English well.

UNIVERSITY OF LOUVAIN.

The degree of M.D. may also be obtained from this University without residence or preliminary examination in Arts, by foreigners who have already a University degree in their own country, or who are able to satisfy the medical faculty as to the genuineness and value of their diplomas. The examination, which is a severe one, is conducted in French, no interpreter being allowed. The examination consists of four parts, which have to be successively passed in all the subjects prescribed for the "candidateship" and for the Doctorate in Medicine, Surgery, and Midwifery, viz.: (1) Anatomy, naked eye and microscopic, with practical tests, Comparative Anatomy, Physiology, Embryology, and Materia Medica; (2) Medical Pathology, both general and special, Pharmacodynamics and Therapeutics, Pathological Anatomy, with practical test; (3) Surgical Pathology, Midwifery, Hygiene, and Forensic Medicine; (4) Practical examinations in Clinical Medicine, Surgery, Midwifery, Ophthalmology, and Operative Surgery. In addition to these various tests, the candidate has to present a dissertation which he must defend in public, together with twelve theses annexed thereto. The fee is about £22. This examination does not give a right to practice in Belgium, to obtain which additional tests must be passed, and residence at Louvain is also necessary.

ITALY.

GRADUATION IN MEDICINE.

The Italian Universities at which degrees in Medicine are granted are the Royal Universities of Bologna, Cagliari, Catania, Genoa, Messina, Modena, Naples, Padua, Palermo, Pavia, Parma, Pisa, Rome, Sassari, Siena, and Turin; the free Universities of Camerino, Perugia, and Ferrara, and the Royal Institute for Superior Studies at Florence.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some recognised foreign University, and satisfactory proof that they have actually gone through all the studies and passed the examinations required for the same. They must also pass the ordinary examinations for the medical degree, and pay the fees. The examinations are usually conducted in the Italian or the Latin language.

UNITED STATES OF AMERICA.

INSTITUTIONS GRANTING DEGREES.

The United States possess a very large number of institutions empowered by charter to grant the degree of Doctor of Medicine, these being in some instances special colleges and schools of medicine and surgery, and in others the medical departments of universities. The subjoined is a list of them. There are also several "eclectic" and homœopathic colleges, which are not included in the list.

Alabama.—Medical College of Alabama (Mobile).

Arkansas.—Medical Department of Arkansas Industrial University (Little Rock).

California.—Cooper Medical College (San Francisco), Medical Department of the University of California (San Francisco), College of Medicine of the University of Southern California (Los Angeles).

Colorado.—Medical Department of the University of Denver, Medical Department of the University of Colorado (Boulder), Medical Department of the Rocky Mountain University (Gross Medical College, Denver).

Connecticut.—Department of Medicine, Yale University (New Haven).

District of Columbia.—National Medical College, Columbian University (Washington); Medical Department of the University of Georgetown (Washington), Medical Department of Howard University (Washington), Medical Department of National University (Washington).

Florida.—Medical Department of the University of Florida (Tallahassee).

Georgia.—Medical College of Georgia (Augusta), Atlanta Medical College, Southern Medical College (Atlanta).

Illinois.—Rush Medical College (Chicago), Chicago Medical College, Women's Medical College (Chicago), College of Physicians and Surgeons of Chicago, Physio-Medical Institute (Chicago), State Board of Health of Illinois, Chaddock School of Medicine (Quincy).

Indiana.—Physio-Medical College of Indiana (Indianapolis), Medical College of Indiana (Indianapolis), Central College of Physicians and Surgeons (Indianapolis), Fort Wayne College of Medicine.

Iowa.—State Board of Medical Examiners, College of Physicians and Surgeons (Keokuk), Medical Department of the State University (Iowa City), College of Physicians and Surgeons of Iowa (Des Moines).

Kentucky.—Medical Department of the University of Louisville, Kentucky School of Medicine (Louisville), Louisville Medical College, Hospital College of Medicine (Louisville).

Louisiana.—Medical Department of Tulane University of Louisiana (New Orleans).

Maine.—Medical School of Maine at Bowdoin College (Brunswick).

Maryland.—School of Medicine of the University of Maryland (Baltimore), College of Physicians and Surgeons (Baltimore), Baltimore Medical College, Women's Medical College (Baltimore), Baltimore University School of Medicine, Medical Department Johns Hopkins University (Baltimore).

Massachusetts.—Harvard University Medical School (Boston), College of Physicians and Surgeons (Boston).

Michigan.—Department of Medicine and Surgery, University of Michigan (Ann Arbor), Detroit College of Medicine (Detroit), Michigan College of Medicine and Surgery (Detroit).

Minnesota.—State Board of Medical Examiners, Medical Department of the University of Minnesota (Minneapolis).

Missouri.—State Board of Health of Missouri (St. Louis), Medical Department of the University of the State of Missouri (Columbia), Missouri Medical College (St. Louis), St. Louis Medical College, Kansas City Medical College, St. Louis College of Physicians and Surgeons, North-Western Medical College of St. Joseph, Medical Department of the University of Kansas City, St. Joseph Medical College, Ensworth Medical College (St. Joseph).

Nebraska.—Omaha Medical College.

New Hampshire.—Medical Department of Dartmouth College (Hanover).

New Jersey.—Medical Society of New Jersey.

New York.—College of Physicians and Surgeons in the City of New York, Albany Medical College, Medical Department of the University of the City of New York, Medical Department of the University of Buffalo, Long Island College Hospital (Brooklyn), Bellevue Hospital Medical College (New York), College of Medicine of Syracuse University, Women's Medical College (New York), Medical Department of Niagara University (Buffalo), Regents of the University of New York State.

North Carolina.—Board of Medical Examiners, Medical Department of Shaw University (Raleigh).

Ohio.—Medical College of Ohio (Cincinnati), Columbus Medical College, Starling Medical College (Columbus), Medical Department of the Western Reserve University (Cleveland), Cincinnati College of Medicine and Surgery, Miami Medical College (Cincinnati), Medical Department of the University of Wooster (Cleveland), Columbus Medical College, Toledo Medical College, North-Western Ohio Medical College (Toledo), Women's Medical College (Cincinnati).

Oregon.—Medical Department of the Willamette University (Portland), Medical Department University of State of Oregon.

Pennsylvania.—Medical Department of the University of Pennsylvania (Philadelphia), Jefferson Medical College (Philadelphia), Women's Medical College (Philadelphia), Medico-Chirurgical College of Philadelphia, Western Pennsylvania Medical College.

South Carolina.—Medical College of the State of South Carolina (Charleston).

Tennessee.—Medical Departments of the University of Nashville and Vanderbilt University (Nashville), Meharry Medical Department of Central Tennessee College (Nashville), Nashville Medical College, Medical Department of the University of Tennessee, Memphis Hospital Medical College.

Texas.—Texas Medical College and Hospital (Galveston).

Vermont.—Medical Department of the University of Vermont (Burlington).

Virginia.—Medical Examining Board of Virginia, Medical Department of the University of Virginia (Charlottesville), Medical College of Virginia (Richmond).

DIFFERENT STATE-LAW REGULATIONS.

The laws regulating the practice of medicine vary in the different States. The following is an outline of the laws of each State and Territory:—

Alabama.—Diplomas of Medical Colleges confer no right to practice. Licences are granted after examination by the Board of Censors of the Medical Association of the State, and the Boards of Censors of the several County Medical Societies affiliated to the Association. There is a Medical Society and a Board of Examiners in every County in the State.

Arkansas.—Authorisation to practice is granted after examination by County Boards. Candidates rejected by County Boards may be examined by State Boards, and receive licence if found qualified. Licences are registered, and qualify for practice throughout the state.

California.—A Board of Examiners issues certificates to holders of genuine diplomas, and examines candidates for practice who are not graduates or licentiates.

Colorado.—The State Board of Medical Examiners grants licences to graduates after examination of their diplomas, and to other persons after an examination in medical science and practice.

Connecticut.—No law for recognition of diplomas or for examination. Itinerant practitioners are licenced.

Columbia (District).—The Medical Society of the District of Columbia grants licences after examination, or the production of a diploma from a recognised medical college or Board of Examiners.

Florida.—Boards of Medical Examiners examine and grant licences to persons not possessing diplomas.

Georgia.—Authorisation to practice is granted to holders of diplomas from incorporated medical colleges, medical schools, or universities. Practitioners must be registered in the county in which they practice.

Illinois.—The State Board of Health examines diplomas of persons desiring licence to practice, and issues certificates to those whose certificates are genuine. Other persons receive licence after examination by the Board. Certificates are registered in the counties in which the holders reside.

Indiana.—No law regulating qualifications. Practitioners of medicine are registered in the counties in which they reside.

Iowa.—Every person practising within the State is required to have a certificate from the State Board of Examiners. The certificates are granted to graduates of medical colleges of good standing after verification, and to others after examination before the Board.

Kansas.—The regulations are generally similar to those of California.

Kentucky.—All practitioners must be registered. Diplomas from legally chartered schools in the State, or from other American or foreign schools certified either by a State school or a State medical society, are recognised as giving the right to practice.

Louisiana.—Degrees of Doctor of Medicine from a recognised institution in America or Europe are recognised and certified by the State Board of

Health. No provision for examination of candidates for registration.

Maine.—No law regulating medical practice.

Maryland.—No Act regulating medical practice.

Massachusetts. — No law regulating medical practice.

Michigan.—Graduates of legally authorised institutions in the United States or in other countries are registered.

Minnesota.—No diploma is recognised as entitling the possessor to practice. All practitioners must obtain a licence from the State Board of Medical Examiners after examination. Certificates are registered by county clerks.

Mississippi.—All candidates for practice must be examined and licenced by Boards of Censors, of which one is appointed for each congressional district. Diplomas are not recognised as qualifications. Licences to practice are registered in counties.

Missouri.—Degrees in Medicine are examined and verified by the State Board of Health. Licences are granted only to graduates, and the standard of recognition of medical colleges is the same as that of the Illinois Board. All certificates of Board are registered in the counties in which the holders reside.

Nebraska.— Graduates of medical colleges and persons licenced after examination by medical boards of other States are entitled to registration in their respective counties. No provision for ascertaining genuiness of diplomas.

Nevada.—Diplomas of chartered medical schools are recognised and registered in counties.

New Hampshire.—Boards of Censors elected by duly organised medical societies in the State grant licences to holders of satisfactory diplomas, and to other persons after examination.

New Jersey.—Graduates of medical colleges of universities of good standing, or medical societies authorised to grant diplomas, or persons legally qualified in other States, are entitled to be registered as practitioners in the counties in which they reside.

New Mexico (Territory).—A Board of Medical Examiners examines diplomas as to their genuineness, and examines persons not holders of diplomas. Certificates are registered in counties.

New York.—All qualifications must be registered in the counties where the practitioners reside. Diplomas of other States are examined, and, if approved, endorsed by an incorporated medical institution within this State. The degree of Doctor of Medicine granted within this State is a qualification to practice, when duly registered.

North Carolina.—A Board of Medical Examiners examines all applicants for licence to practice.

Ohio.—Persons are prohibited from practising who do not possess a degree from a School of Medicine in the United States or in a foreign country, or a certificate of qualification of a State or county medical society.

Oregon.—No law for regulating practice of medicine.

Pennsylvania.—Diplomas of legally chartered universities are recognised, on presentation to the protonotary of each county, and registration by him. Before registration, however, the endorsement of a State Medical College must be obtained.

Rhode Island.—No regulations as to qualifications.

South Carolina.—Diplomas and qualifications are admitted, on being exhibited to the Faculty of some incorporated college or the Medical Board of the State, and, on approval, registered.

Tennessee.—There are no laws regulating the practice of medicine.

Texas.—Boards of Medical Examiners grant certificates of qualification, after examination. Certificates must be registered in counties.

Vermont.—Boards of Censors appointed by organised medical societies examine diplomas and recognise them if approved, and examine candidates not having diplomas; and grant certificates of authorisation to practice.

Virginia.—All persons wishing to practice medicine must be examined by the Board of Medical Examiners. Graduates and non-graduates are subjected to the same examination.

West Virginia.—The State Board of Health issues certificates of qualification to holders of diplomas of reputable colleges, and examines and licences others.

Wisconsin.—Professional privileges are granted only to persons who have a diploma of some incorporated medical society or college, or who are admitted to practice after examination by a State or county medical Society.

Wyoming (Territory).—No person is allowed to practice without a diploma from a chartered medical school, to be registered in the county where the holder resides.

CANADA.

MEDICAL EXAMINING BODIES.

The following are the Medical Examining Bodies and Schools in the Dominion of Canada:—

Ontario.—Toronto School of Medicine, affiliated with the University of Toronto and the University of Victoria College; Trinity Medical College, affiliated with the Universities of Trinity College, Toronto, Manitoba, Queen's University, and Victoria University; Royal College of Physicians and Surgeons, affiliated with the Queen's University; Medical Department of the Western University, London; Women's Medical College, affiliated with the University of Trinity College, Toronto; Women's Medical College, Kingston, affiliated with Queen's University.

Quebec. — Medical Department of McGill University; Ecole de Médecine et de Chirurgie, affiliated with the University of Victoria; Medical Department of Laval University; Faculty of Medicine, University of Bishop's College; College of Physicians and Surgeons of Quebec.

Nova Scotia. — Halifax Medical College; Medical Faculty of Dalhousie University, Halifax.

Manitoba.—Manitoba Medical College, affiliated with the University of Manitoba.

The possession of an M.D. degree does not entitle the holder to practice. He must be *registered.* In the Provinces of the Dominion, with the exception of Ontario, the possession of a Degree in Medicine from a recognised University entitles the holder to register. In *Quebec*, graduates of the Universities of the province must appear in person at the May or September meeting of the Board, and present and swear to their diplomas. Registration is granted only at these periods. It is optional with the Board whether the holder of a degree from a Canadian University outside the Province of Quebec can register without further examination. In some cases the examination has been enforced. In *Ontario*, unless in the case of a registered practitioner of Great Britain, the examination of the College of Physicians and Surgeons of the province must be passed before registration. The examination is held every spring. In *Nova Scotia*, *New Brunswick*, *Manitoba*, and *British Columbia* the provincial boards accept the degrees of Canadian Universities without examination. *Prince Edward Island* has as yet no Medical Board. In most of the *West India Islands* a certificate of registration in one of the Provinces of the Dominion entitles the holder to practice.

AUSTRALASIA.

LAWS REGULATING THE PRACTICE OF MEDICINE.

The following is a summary of the chief laws regulating the practice of Medicine in the Australasian Colonies:—

New South Wales.—Any person who shall prove that he has had a regular course of medical education of not less than three years' duration, and, after due examination, has received a degree from the university of Sydney, or a degree or diploma from any other body duly recognised in the country to which the applicant belongs, and entitling him to practice therein, shall be deemed to be a legally qualified medical practitioner, and shall be entitled to a certificate from the Medical Board.

New Zealand.— The holders of British and Irish degrees, diplomas, and licences registrable under any Act of the Imperial Parliament; persons who have received in any country a degree or diploma entitling them to practice Medicine or Surgery; and duly qualified Medical officers of the Army and Navy are entitled to be registered. Every applicant must give notice of his intention to the Registrar, and produce his diploma or other evidence of qualification. The notice of application shall be published in a newspaper; and the Registrar, if he see fit after examination, may refuse to enter the name of the applicant. The fees payable are: On deposit of evidence of qualification, £1; certificate of registration, 5s. For alteration of qualification in the Register, the fee is 10s.; for any other alteration in the Register, 5s.

Queensland, *South Australia*, *Tasmania*, *Victoria.*—The conditions under which qualified practitioners can be registered are in general similar to those above described.

SCHOOL OF MEDICINE OF THE CATHOLIC UNIVERSITY OF IRELAND.

The teaching of this institution is recognized by the Royal University of Ireland, the University of Dublin, the College of Physicians and Surgeons, and all the licensing boards of the United Kingdom. The lectures of the winter session, 1890-91, begin November 1, 1890, and end March 31, 1891. There is a complete staff of lecturers and teachers in all the subjects; the details of which can be obtained on application to the Medical Registrar, Medical School, Cecilia St., Dublin. Five exhibitions are offered for competition yearly among the students of the school, value £14 (2), £15, £10, and £20, and a gold medal.

THE MIDDLESEX COLLEGE OF CHEMISTRY AND PHARMACY,

40, CHARLOTTE STREET, PORTLAND PLACE, W.

This institution has recently been founded for the purpose of organising a series of classes for the instruction, theoretical and practical, of students, who, for any reason, may desire or require assistance in addition to that obtainable at their respective medical schools. So far, only the classes in chemistry, materia medica, and pharmacy, have been arranged, but the success attending these has been so great, as to appear to justify the extension of the system to all the subjects of the curriculum, and we understand that arrangements have now been made with this object in view. The terms appear to be very moderate and are "inclusive."

HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK, E.

This Hospital was founded in 1848, and contains 164 beds. A large number of patients, both in and out, come under observation in the course of the year, and they afford exceptional opportunities for clinical study, the details of which can be ascertained on application to the physicians. Office: 24, Finsbury Circus.

ARTICLE 743.

THE MONTHLY MIRROR OF MEDICINE.

THE morbid anatomy of diabetes mellitus is a subject on which much light has yet to be thrown. Dr. Saundby's recent Bradshawe Lecture is, in many respects, an important and interesting contribution to the subject. He places on record many observations of his own, and ably summarises the observations and conclusions at which other authorities have arrived. So far from having no morbid anatomy, he points out that diabetes has one of a very complicated kind, and one that cannot be without bearing on its pathology. The most important lesion is, in his opinion, the wasteing of the pancreas, but it is not until this organ has been examined in a much larger series of cases, that we shall be in a position to speak definitely as to its pathological position and value. Of great importance, also, are the changes in the abdominal sympathetic ganglia. Dr. Saundby has never seen the semilunar ganglia enlarged except in diabetes. In some of his cases the right semilunar ganglion was quite twice the normal size. In three of his cases, however, the semilunar ganglia were normal. On the whole, the changes in these ganglia are too inconstant to form the basis of a satisfactory theory. The liver-changes which are found are probably altogether secondary to a functional hyperæmia induced by nervous influence. The various changes which have been noticed by Dr. Saundby and others in the kidneys, lungs, heart, and brain are probably the result of defective nutrition and longstanding hyperglycœmia.

That the pancreas, however, stands in some relation to diabetes can hardly be doubted. The experiments of Minkowski, Lépine, and others have shown that extirpation of the pancreas in animals is followed by glycosuria. Again, the relationship is shown by the experience of Dr. Bull, of New York, whose patient died of diabetes after he had extirpated the pancreas. Duffey has published a case of diabetes associated with cancer of the pancreas. The organ is by no means so carefully examined by pathologists as it deserves to be, and there is wanting that familiarity with its naked-eye and microscopic appearances which gives value to their descriptions. That a microscopical examination is necessary is evidenced by a case of diabetes quite recently reported by M. Lépine, of Lyons, where the pancreas appeared healthy at the autopsy. On microscopical examination, however, bands of connective tissue were demonstrated around the acini. Such facts show that in certain cases of diabetes, where the naked-eye appearances are normal, microscopical lesions of the pancreas may be found. In this case the lesion observed with the microscope was capable of interfering with the lymphatic circulation around the acini, and, consequently, with the absorption of the glycolytic ferment. This is supposing that Lépine's theory is correct, that affections of the pancreas give rise to diabetes through suppression of a normal sugar-destroying ferment, which should pass by the pancreatic lymphatics to mingle with the chyle.

If Dr. Saundby's Bradshawe Lecture may be said to represent our most recent knowledge of the morbid anatomy of diabetes mellitus, it may be equally affirmed that our present knowledge of the treatment of the malady is fully set forth in Dr. Pavy's paper, "On the Principles of the Treatment of Diabetes Mellitus," read at the Berlin International Congress. Dr. Pavy commences by laying down the rationale upon which the treatment should be conducted. He observes that there is no theoretical consideration involved in the statement that the carbohydrates in the system of the diabetic, fail to undergo those right chemical changes, which in health lead to their disappearances, and that, consequently, whether ingested from without or formed by the splitting up of nitrogenous matter within, they become disposed of by egress with the urine. Whatever sugar appears in the urine has previously existed in the blood. This means the existence of an unnatural state of the blood, which induces a deviation from healthy action throughout the system. In proportion to the amount of sugar reaching the general circulation, and so passing out through the kidney, will stand the measure of the severity of the symptoms of diabetes. The larger the amount of sugar eliminated with the urine. the worse in every direction will be the condition of the patient suffering from diabetes.

The object to be attained by treatment is to diminish the deviation from health as far as practicable. Observation shows that the amount of error as regards sugar in the blood, and, following upon this, sugar to be discharged with the urine, is in proportion to the amount of carbohydrate principles, of whatever kind, ingested. The nature of the errors to be dealt with consists in a failure of the power of the system to dispose of the carbohydrates in a manner to lead to their utilization and disappearance. There is a sacrifice of material which ought by rights to be turned to account, but this is a point that has but little bearing on the production of the phenomena that are observed in connection with the disease. If it were merely a question of the waste of carbohydrates, there would be no reason against their being taken and allowed to run off. What, in reality, inflicts the harm is the altered constitution of the blood, occasioned by the presence in it of the sugar, which passes through the system to the urine. Accumulation of sugar in the blood leads to symptoms proportionate in severity to the deviation from the natural state. Our object is to reduce, as far as possible, this deviation. We may not be able to restore the transformation or assimilative power which has become impaired or lost, and then the only way is to withhold the alimentary principles which lead to the passage of sugar through the system. In the course of Dr. Pavy's experience, he has never known anything serious to arise as a part of the disease so long as the urine has been kept free from sugar. On the other hand, when sugar is passing through the system, not only are there observed the symptoms ordinarily consequent thereon, but there exists a constant state of insecurity from the danger of the supervention of the serious issues known to follow upon the disease.

The first consideration in the treatment is, therefore, to control by dietetic measures the passage of sugar through the system. The real point, however, to be aimed at is to restore the assimilative power over the carbohydrate elements of food. According to Dr. Pavy's experience, opium and its derivations, codeine and morphine, are the medical agents which, more than any others, assist in the actual cure of the disease, that is, in a restoration of the assimilative power which has been impaired.

The treatment of chronic Bright's disease has been recently dealt with by high authorities. At the late Congress of Physicians at Vienna, Senator and von Siemssen laid down the principles of treatment of the various forms of this malady, and at the Berlin International Congress Dr. Grainger Stewart read a paper on the same subject. In the treatment of chronic parenchymatous nephritis, Senator affirms that there is no remedy possessing a special action on the inflamed kidneys. All those recommended, such as tannic acid, ergot, arsenic, ichthyol, etc., are of doubtful utility. On this point von Ziemssen and Grainger Stewart are of accord, though the former thinks iodide of potassium may be given with advantage. On the all-important subject of diet in Bright's disease, Senator lays down the principle that the dietary to be recommended, in the parenchymatous form, is that which, while keeping up the patient's strength, does not throw too great a burthen on the kidneys, and such a dietary is one which notably reduces the consumption of albuminoids, and, at the same time, raises that of fats and carbohydrates. Although highly valuing milk as an article of diet, Senator is not a partisan of an exclusive milk-diet, on the ground that it is often repugnant, and that it is apt to produce catarrh of the stomach. Dr. Grainger Stewart states that these results may be avoided by judicious administration. The rules he follows are never to give it in large quantity at a time, always to dilute it with water, hot or cold, or with aërated water, or to add lime-water if the bowels tend to be loose. The importance of the ingestion of fluids for the purpose of irrigating and washing out the renal tubules is dwelt on in all three papers. For this purpose a diet exclusively, or largely, composed of milk is especially suitable. As to diuretics, Senator draws a distinction between the functional elements of the organ. Augmentation of the activity of the secretory elements, that is, of the epithelium of the tubules, would be naturally prejudicial, but it is otherwise with the glomeruli. We may with advantage increase the filtration process in these. He cites, as perhaps the most inoffensive means of increasing the afflux of liquids to the kidneys, the inunction of the skin with lard or other fattly substances. Apart from the ingestion of large quantities of fluids, already alluded to, the most important diuretics are those which, by stimulating the cardiac muscle, augment the blood-pressure; such are, digilatis, squill, strophanthus, and convallaria. Irritating diuretics, such as cantharides, turpentine, etc., are, in general, contra-indicated.

In the treatments of interstitial nephritis, Senator is favourable to a long-continued course of iodide of potassium. Grainger Stewart remarks that he has seen evidence that the interstitial process may be arrested sometimes in the early stages. This effect, however, was mainly brought about, not by any medicines, but by rest, regulation of diet, cutting off the supply of alcohol, previously excessive, and resorting to a favourable climate during the winter. The predominating element in the symptomatology of interstitial nephritis is, the cardiac hypertrophy and high arterial tension. In treating the disease, the heart rather than the kidneys has to be attended to. The mode of life must be carefully regulated. Great temperance in eating and drinking is indispensable. Alcoholic drinks, which excite the heart and predispose to arteriosclerosis, should be prohibited. The indication for restricting the albuminoids is not so strong as in the parenchymatous form, and milk-diet is less useful. Excessive cardiac action and cardiac failure may each at different stages of the disease require treatment.

The prominence which has, during the last year, been given to hypnotism as a therapeutic agent, made it fitting that the subject should be one of those discussed at the Annual Meeting of the British Medical Association. Papers were read, in the Section of Psychology, upon the subject by Dr. Norman Kerr and Dr. G. C. Kingsbury. Dr. Kerr started by accepting, practically, all the alleged hypnotic phenomena as facts, but strongly questioned whether hypnotism was a desirable and justifiable remedy. He maintained that only a limited number were susceptible. He saw in hypnosis only a disordered cerebral state, an abnormal psychical state with an exaltation of receptivity and energy. The after-effect was a disturbance of mental balance, a dissipation of nerve energy, and nerve exhaustion, Though suffering was sometimes assuaged by hypnotic suggestion, the underlying disease was not necessarily cured. The dangers of hypnotism, Dr. Kerr maintained, were very great. Each *séance* might bring the hypnotic more under the control of the hypnotist, often ending in a complete submission of the will of the former to the latter. He hoped that the profession would set its face against the whole practice as a hazardous and unreliable remedy, liable to the gravest abuses, and never free from the risk of perilous sequelæ. Dr. Kingsbury, whose paper followed that of Dr. Kerr, discussed the dangers of hypnotism, and the range of its applicability. He controverted the statement that only a limited number were susceptible, and he gave particulars of many cases which had been cured by the aid of hypnotism. Immediately after the papers, Drs. Lloyd, Tuckey, and Kingsbury gave a series of demonstrations on two gentlemen who had volunteered themselves as subjects. These demonstrations seemed to impress those present, and many speakers admitted that the spirit of scepticism, in which they had come, had, to a great extent, been dispelled. Ultimately, a committee was appointed to investigate the subject. M. Bérillon, of Paris, in a paper read at the Berlin Congress, endeavoured to make a strong case for the therapeutic value of hypnotic suggestion. Like other advocates of this method, it is especially in affections of the nervous system that he claims for it decided results. During 1889, and the first half of 1890, M. Bérillon treated three hundred and sixty patients. These patients received no other treatment than suggestion made while in the hypnotic state. Of the total number of patients, more than a third, one hundred and fifty-five, were affected with hysteria, and, in these cases, success was the rule. Other nervous maladies which were treated were chorea, paralysis, agitans, epilepsy, and nocturnal somnambulism, and among all these, a certain number of cures were effected. Of twenty epileptics treated, four were cured, and in these the favourable result was durable, the cases having remained well, at the date of the paper, for upwards of a year. M. Bérillon claims to have had considerable success in treating nervous affections in children. Thus he records many cures of nocturnal incontinence of urine.

ARTICLE 744.

THE MIRROR OF SURGERY.

THE subject of genito-urinary diseases has come to occupy an important position among specialist practitioners, and, as is well known, there is now an Association in America of Genito-urinary Surgeons. At a recent meeting of this association, a paper was read by Dr. John P. Brydon, of St. Louis, on tuberculosis of the genito-urinary tract, and from this paper, published in the July number of the *Journal of Cutaneous and Genito-urinary Diseases*, we reproduce some observations. The paper had reference mainly to the questions of diagnosis and the advisability of surgical treatment. The opinions expressed were the results of a clinical study of eighty-four cases of the disease, and of twenty-three operations done on fourteen patients. The cases covered the entire field of genito-urinary tuberculosis, both in reference to the tissues and organs affected, and the degrees of intensity shown by the pathological process. The operative work might also be said to cover the entire field, there being seven operations done on the testes (five removals and two extensive curettings), fifteen on the prostato-vesical structures, and one on the kidney (nephrotomy). The following were the conclusions arrived at by the author:—(1) That the pathogenic factor reaches the parts involved by way of the hæmatic channels. (2) That more than one part of the uro-genital system is affected very early in the history of the disease, perhaps simultaneously. (3) That the prostato-vesical and the periprostatic regions show by far the greatest liability to early involvement. (4) That all the evidence points to the conclusion that we have to deal, even in its earliest recognisable stages, with a general disease which manifests itself by localisations. (5) That present experience does not warrant the belief that operations, however extensive, undertaken with the view of excising localised lesions, and consequently curing the disease, will be successful. (6) That our chief resource is still in general anti-tubercular treatment, reserving surgical interference for the palliation and relief of pain, bleeding and wasting suppuration.

In some remarks upon the subject of circumcision at the same meeting of the association, Dr. E. R. Palmer, of Louisville, said that the operation was indicated, in his opinion, in the following diseased conditions:—(1) In gleet, with stricture, where a long and tight prepuce interfered with the operation of urethrotomy. (2) In cases of recurring herpes and balanitis. (3) In syphilis, where the chancre might be removed with the redundant tissue. (4) In some cases of chancroid complicated with phymosis, where the local disease was beyond the reach of remedies. The author, too, was strongly in favour of preserving the frænum, using interrupted suture and the application of a dry antiseptic dressing.

In the August number of the same journal a paper is contributed by Dr. J. W. White, of Philadelphia, in which the treatment of recent anterior urethritis by antiseptics is discussed. He states that the microscopical and experimental evidence in favour of the bacterial origin of gonorrhœa is confirmed by clinical and therapeutical experience, while the results of antiseptic treatment have not been so uniformly successful as would be expected, on account both of the anatomical and physiological peculiarities of the male urethra. This is partly explained by some of the lacunæ, opening backwards, together with the difficulty of applying sufficiently energetic local antiseptics, the necessarily intermittent character of such applications, and the failure to combine with the topical treatment appropriate internal medication. Again, no one antiseptic agent can be depended on, in the strength at which it can be borne by the inflamed urethral mucous membrane, completely to sterilise the discharges and the suppurating surfaces. A judicious combination of several antiseptics, if not essential to success, is at least of considerable value. The author has found that the internal administration of salol, in conjunction with copaiba and cubebs, renders the urine aseptic, and probably antiseptic, so that it acts as an exceptionally thorough and efficient antiseptic injection, shortening the duration of the disease and diminishing the frequency and severity of the complications. The production of urinary asepsis by internal medication is of considerable value, not only in the inflammatory affections of the genito-urinary tract, but in the preparation of the patient for operation upon those organs, and in the after-treatment.

Dr. Cordier, of Lyons, recommends the following method of treating buboes. As soon as œdema of the skin shows the presence of pus, he makes a puncture with a straight bistoury. There is discharged along with the blood some streaks of pus. No pressure is made, but the cavity is injected with about a cubic centimetre of a 1 in 50 solution of nitrate of silver. Without paying any attention as to whether the solution flows out again or not, iodoform dressing is applied covered with a spica bandage. When this slight operation is made early enough, no purulent discharge follows, and the bubo rapidly disappears, leaving behind only an indurated nodule. When, however, the puncture is made in a bubo much more advanced, and in full suppuration, the pus must be carefully washed out. One injection is used to cleanse the part from the pus, and a second injection is made, and the solution allowed to remain. Some inflammatory reaction follows, and abundant suppuration occurs, lasting for three or four days, and then begins to subside. Healing quickly succeeds, and the opening closes without leaving a perceptible cicatrix. Dr. Cordier has obtained the same results, whether the bubo was chancrous or simply inflammatory.

In a useful and comprehensive paper on the surgical treatment of tumours in the bladder, contributed to the current number of the *Annals of Surgery*, Dr. Phineas S. Conner observes that in the years 1874 to 1888, one hundred and seventy-six patients were operated on for some neoplasm of the bladder, 124 males and 52 females, with an apparent resulting mortality of 22·7 per cent.; 26·6 among males, and 13·4 per cent. among females. But, on close investigation, only 23 deaths of the 40, or 13 per cent., could be really attributed to the result of operative interference. The death-rate, therefore, of the operation itself can be justly placed at so low a figure that it may be disregarded in determining the propriety in any given case of attempting the removal of a vesical new growth. In more than three-quarters of the cases operated on, relief has been afforded, either permanent or for many months or years. More than once, when recurrence has taken place, it has been in a region of the bladder remote from that originally affected. The author states that in women the shortness and dilatability of the urethra indicate that the tumour can be most readily reached through this canal. Though incontinence of urine may follow rapid dilatation, it is not likely to do so, and, even if it occurs, it is in an ordinary way only temporary. In males, the bladders have been opened either through the perinæum or by the supra-pubic incision; the mortality-rate from these operations being absolutely the same. The author concludes, that only after operation is there much chance of recovery from any kind of vesical tumour; that an operation should be done in all except the least and most severe cases; that, as a rule, in males, the bladder should be opened above the pubes; that the removal should be made as complete as the situation and extent of the growth will permit. There is an addendum to the paper, namely, a tabulated list of published operations for tumours of the bladder occurring in women and men; and this forms a most useful contribution to the subject. The list embraces the period between the years 1874 and 1888.

The literature of spinal surgery has received an important addition by the paper of Dr. Robert Abbé, of New York, which is contributed to the *Medical Record* for July 26th last. The paper includes an interesting record of eight cases which have been under the author's care. The cases were, respectively, three of paraplegia from fracture; one of early curetting of a vertebra for Pott's disease; two of tumours of the vertebral canal with paraplegia; and two of intra-dural section of some of the posterior roots of the brachial plexus for neuralgia. For the full notes of these cases we must refer the reader to the original article. The author takes exception to Horsley's remark that the dura is highly sensitive, and that the patient should be deeply narcotised when it is cut. He calls attention to the fact that one of his patients endured incision into it of two inches and a half, without an anæsthetic, and expressed to the author at the time that the procedure was painless. Dr. Abbé lays stress upon the method of operating which he adopts. The incision should be on one side only of the spines, the latter being cut off and dragged to the other side, exposing the entire arch without dividing the interspinous ligament. The bone-cutting instruments to be used are two narrow rongeurs, one curved, one straight with a quarter-inch bite, and preserving a flat gothic-arch aspect when the points are brought together. Any saw is dangerous, awkward, and inefficient. The rongeurs are by far the quickest. The points in favour of this method of operating, the author asserts, are, that is the most speedy, the least bloody, preserves all the tissues in and about the spines, which are replaced, and give firmness to the back as well as preventing a gap that nature must fill.

ARTICLE 745.

THE REPORT OF THE TRINIDAD LEPER ASYLUM.

THIS Report, dated February, 1890, gives a considerable amount of important information bearing upon the questions of segregation, treatment, propagation, &c., of Leprosy. Dr. Rake recommends the complete enclosure of the Asylum grounds, as urgently needed for the control of criminal and disorderly patients. He considers that "there are three alternatives:—(1) The building of a high wall all round the Asylum, in fact making it into a gaol. This would be very costly, but if compulsory segregation is established it will be necessary. (2) The erection of Leper quarters in the new reformatories. The Dominican Sisters have no influence over the more hardened of the women, and nothing short of the discipline of a reformatory is likely to avail. (3) The removal of some of the most troublesome patients to an island, as was done at Molokai." Leper huts could be built, and certain of the patients could be married by a priest. This Father Damien found to answer in his Leper colony. There need not be much fear of a large increase of population. From 1866 to 1884, 2,864 persons were consigned to the Leper settlement at Kalawao; and in 1884 there were twenty-six children alive who were born at the settlement, and one or both of whose parents were lepers before each birth. Only two of these had developed leprosy up to date, though in addition to being born of Leper parents they had lived in the houses of lepers all their lives.* Such an island would have to be under police-supervision, and could be visited by a doctor once or twice a week. The quieter and more infirm patients could be retained at Corcorite, and banishment to this island could be made a punishment for bad behaviour.

For the criminal lepers nothing but prison discipline or police supervision on such an island will be of avail, unless the superintendent of the asylum has a sufficient staff of warders to deal with criminal and disorderly patients on the spot.

Statistics.—The general statistics of the year show little variation from those of 1888. The number of inmates on Dec. 31, 1889, was 179. The percentage of deaths was 7·4—the lowest now recorded at the Asylum. Dr. Rake considers that the immediate and deep incision of sinuses and ulcers has had much to do with the prevention of gangrene, and consequent lowering of mortality. Of thirty-eight admitted during the year, twenty-three were natives of Trinidad. Of sixteen deaths, some form of kidney disease was found in seven—in two of which there was also tuberculosis of viscera. Two patients died from sunstroke and Addison's disease, two from cerebral causes, and one from phthisis and tuberculosis; two from exhaustion and ulceration; one from heart-disease, and one from asphyxia from leprous deposit in the larnyx. In three cases the ankylostoma duodenale was found *post mortem*. In the Trinidad Asylum death from phthisis is not uncommon in the anæsthetic as in the other forms of leprosy. Four hundred and one operations were performed, 192 being incisions of various kinds, and 168 removals of necrosed bone or cartilage; one leg-amputation for gangrene, and twenty-five of fingers and toes. Ligaturing the vessels supplying a tubercle of the conjunctiva gave temporary relief in one case.

The Question of Contagion.—With regard to the value of Father Damien's case and that of the inoculated convict Keanu for absolutely proving contagion, one cannot logically accept them as final, for they both occurred in a country infected with leprosy. "Living in a colony of lepers as he (Father Damien) was, we cannot be sure whether he became infected from actual contact with them, or from food, water, or some intermediary host. Most people now-a-days believe in the leprosy bacillus, and the question is narrowed down to this: can a healthy person more readily derive the bacillus from an infected human being, or from food, air, water, or some host which contains the bacillus or its spores? In any case, whether or not we accept Father Damien's case as proving contagion, it becomes, I think, an argument for segregation, for every leper may possibly become a centre for the dissemination of the bacilli or spores in his immediate surroundings, and by reducing these centres the spread of the disease may possibly be checked. We do not yet know what is the life-history of the bacillus outside the body, but it is quite possible that there is an intermediate spore-stage which has not yet been recognized. This theory of an intermediate stage or host might explain the difficulty or impossibility of the direct communication of the disease from one subject to another, as in the analogous case of tapeworms and other cestoda, or, again, in the case of the filaria sanguinis hominis, where the mosquito is the intermediate host. Against this suggestion it will, of course, be argued that cestoda and nœmatoda are animals, whereas bacilli are plants. This, however, will not upset the possibility of a spore-stage; and what nidus the spores may find outside the body is only of secondary importance."

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* Fitch, Append. Rep. Leprosy in Hawaii, 1886.

Dr. Rake points out a few of the inaccuracies contained in Archdeacon Wright's book, "Leprosy an Imperial Danger." (1) He states that tuberculated leprosy is the most prevalent form in Trinidad. The percentages of the three forms, calculated in the Asylum records for eighteen years, are, however, as follows:—Tuberculated, 36; Anæsthetic, 44; Mixed, 20. (2) He leaves it to be inferred that Indians are readily affected here. At the present time there are no pure-blooded Indians (Caribbean) left, though there are occasional visitors from Venezuela. It is true that there are a good many half-breeds, of whom one or two have been in the Leper Asylum, but one cannot say that Indians in Trinidad are readily attacked by leprosy. (3) The statement is made that a large proportion of foreigners at Molokai become leprous. To prove this the total number of foreigners resident there ought to be given, but this is omitted. In Dr. Mouritz's census of leprosy at Molokai (1886), it appears that only twenty-seven out of six hundred and fifty-two are foreigners. (4) With reference to the question of communicability of leprosy by vaccination, Archdeacon Wright quotes one affirmative reply, written by a Trinidad doctor in answer to a confidential circular. It should be pointed out in fairness that some thirty, or more, other Trinidad doctors, to whom the same circular was addressed, returned negative replies. These examples, which might be multiplied, are enough to show that the statements in the book must be taken with reserve. It seems that in the writer's anxiety to strengthen his arguments in favour of contagion, too much reliance has been placed on stories told by traders, negro nurses, and others, who are scarcely in a position to give scientific evidence. Dr. Rake is not prepared to admit, as far as he has studied the subject, that leprosy is contagious in the ordinary sense of the word; but he thinks that segregation might do good in Trinidad, as it has done in Norway, by lessening the number of infective foci. If the patients were under prison laws and discipline, the administrative difficulties complained of would be solved. At any rate, the experiment would be worth trying.

Lepers in Trinidad.—Dr. Rake criticises the figures given in Père Etienne's book (*e.g.*, 860 lepers in 1878) as well as the number (480), cited by Archdeacon Wright. He has not been able to ascertain that any regular statistics had ever been taken of the lepers in Trinidad before 1889. A circular was then sent round from the Surgeon-General's office, the replies to which have so far revealed only 348 lepers in the Island, 210 of whom are in the asylum. Of course, one cannot rely absolutely on these figures, for there are doubtless many unreported cases; but one would have to allow a considerable margin to arrive at 480, and a very wide one to get 860, the number recorded for 1878. Either, then, the number of lepers has rapidly decreased, or one or other set of figures is very far wrong. It would be an excellent thing if a leper-census could be taken next year, when the general census is taken in Trinidad. Of the total number of 216 lepers treated in the asylum last year, seventy-four, or rather more than one-third, were Coolies. Dr. Rake is of opinion that in many of them the disease is already incubating when they arrive from India.

Earth and Food.—The surface-earth of several graves in the asylum cemetery was examined to test the possibility of spores or bacilli being brought to the surface. Many bacilli were found (except in one case, in which interment was only seven weeks previous), and the earth stained deeply. As the same appearances were found in the grave of a phthisical patient, and in a control-experiment in earth taken from a garden a mile away from the asylum, and the rods were too large for leprosy bacilli, the experiment must be regarded as negative. The same remark applies to a number of experiments in which various kinds of food—salt pork, fat of salt pork, pigeon peas, decaying ditto, decaying salt fish—were carefully examined.

Further cultivation experiments.—Cultures have been continued to the second and third generations. The same white or yellow oily growth described in last year's Report was most frequently observed. In no case did the microscope show any rods which retained majenta after the action of nitric acid, but micrococci were abundantly found. Micrococci were also present in a control-tube not inoculated. In culture from grave-earth and from food rods of various lengths and micrococci were observed, but no leprosy bacilli.

Inoculations of animals.—Several guinea-pigs, rabbits, and pigs have been inoculated with, so far, negatived results. A cat, treated four and a half years ago, was dissected, and no bacilli found; another, inoculated five and a half years ago, is still living, with no sign of leprosy. Dr. Rake suggests that the Home Government might sanction the inoculation with leprosy of two or three condemned criminals in Trinidad, and the commutation of their sentences. Important additions could be thus made to our present knowledge of the pathology and proper treatment of this disease.

Protection and antagonistic inoculation. — Many diseases have been described as retarding the progress of leprosy, viz., variola, pleurisy, pneumonia, erysipelas, and phthisis—instances which seem to point to the possibility of antagonistic inoculation. Swelling of the skin and subsequent disappearance of tubercles have been noticed in patients vaccinated at the Trinidad Asylum. Dr. Rake gives details of a typical case. During the year he has tried the inoculation of cultures, but with no permanent effect up to the present time. Dr. Rake has never known an anæsthetic leper develop tubercles.

Results of Chaulmoogra treatment.—The chief results may be summed up thus: (1) Increase of perspiration (except in one patient), (2) decrease of tubercles, (3) improved appetite and sense of well-being, (4) increase of sensation, (5) increased suppleness of skin and lessening of pain in joints. That the oil is of value in some cases, Dr. Rake has no doubt. He has used Jeye's creolin extensively, and finds it preferable to carbolic acid, in leprous ulceration, reducing smell and promoting the growth of healthy granulations and rapid healing, also for the eczema so often complicating leprosy. Applied pure to ulcerating tubercles and external granulations, it is useful as a caustic.

Treatment of Perforating Ulcer in Leprosy.—The method of stretching the external popliteal or great sciatic is often followed by good results, especially when the ulcer is accompanied by pain in the course of the nerves. Another simpler plan is often efficacious—passing a bistoury through from the ulcer on the sole of the foot to the dorsum, and cutting through all the tissues, bringing the bistoury out between the toes.

The incision is then stuffed with lint, and left to granulate up from the bottom. Dr. Rake records a case of Addison's disease, associated with syphilis and leprosy, in a Hindu.* He gives particulars, also, of a case in which nerve-stretching has been repeated with relief, the great sciatic and external popliteal being each stretched twice in the patient. In giving the sequels of two cases of amputation for leprotic gangrene,† he remarks that they only serve to emphasize what he has said before—that very much may be done by operative interference in leprosy, even in apparently desperate cases. Dr. Rake discusses "The Kidney Lesions in Leprosy considered in Relation to the Skin Changes in which Nephritis was present,"‡ as illustrated in twenty-three cases—*i.e.*, in 29·4 per cent. of autopsies in five years at the Asylum; only twice has he found leprosy bacilli in the kidneys.

A case illustrating the difficulty in diagnosis between congenital syphilis and early leprosy, in a Hindu boy aged eight, is detailed. The rapid disappearance of the tubercles under mercury, and the suspicious appearance of the teeth, raised a doubt; but the course of events was too characteristic, and the patient is now under Chaulmoogra treatment. The question of treatment of early leprosy, by excision of tubercles, is referred to; and the case of a boy, aged eight, described, in which the method was not successful. Dr. Rake considers that it will be worth trying again, in a still earlier subject if possible.

Treatment of Tuberculated Leprosy by Red Iodide of Mercury Ointment.—As in this case (a negro boy, aged eight) the disease took the form of a general infiltration of the extremities, with a few small tubercles on the face, it was thought that a strong germicide ointment like red iodide of mercury might succeed in killing the bacilli, and reducing the infiltration and tubercles. At first there seemed to be slight improvement; but, after a few applications, the ointment lost its caustic effect on the skin, though in the end salivation was set up, and the remedy discontinued. Tuberculation is now progressing in the patient.

In concluding his Report, Dr. Rake praises again the self-abnegation of the Dominican Sisters, who have been so long ministering to the patients. "Much has been written and spoken of Father Damien, and rightly so; but these devoted women had begun their mission five years before he set out from Belgium, so that they are comparative veterans in the campaign of succour." Full statistical tables accompany this important and suggestive Report, of which the above is an abstract.

ARTICLE 746.

QUINAN ON BLEEDING FOR PNEUMONIA.

THE treatment of pneumonia has for a long time afforded a battle-ground both for the theorist and for the practical physician. Besides careful nursing, the treatment most usually adopted in this country appears to be a combination of the expectant and the stimulant, modified according to the varying conditions of the patient, with prompt attention to symptoms. Bennett and Todd protested against the methods then in vogue, of indiscriminate blood-letting and depressants, which they declared to be more fatal than the disease itself. Reaction followed, and depletion is now rare as formerly it was the rule. Many medical men, however, admit that bleeding in the early stages, especially in strong subjects, would be both an admissible and a rational proceeding. Modern views of the pathology of pneumonia, such as that which ascribes its origin to a specific micro-organism, need not affect the main question of bleeding as a thereapeutic agent. The local inflammation, whatever its exact *fons et origo*, demands our attention. There have been some indications of late that physicians, under certain restrictions, are inclined to return to the old practice of depletion. It is of interest, therefore, to hear an American view of the subject.

Prof. Quinan adopts the view that pneumonia is a local inflammation, and not a general disease with a local manifestation in the lung. He claims that for the acute, sthenic form of this disease, attended with profound congestion and speedy inflammation, blood-letting, promptly and judiciously used in the first or second stages, offers the best and most efficient remedy. He agrees with the statement of Dr. Corson, another American, that it is a local disease, differing in nothing but its seat and gravity from other phlegmasiæ. It sets in suddenly with a chill, after some undue exposure, and exhibits no prodromata, as do general or idiopathic fevers. It is often confined to one lung, and as frequently to one lobe of that lung; and, further, one attack does not procure immunity from another, as we should expect were it a specific fever. The fact that it runs a definite and limited course is shared by inflammations in other vascular organs. Proof is wanting to establish the causal relation of the pneumococcus to the disease as shown by the report of "The English Collective Investigation Committee on Pneumonia," in 1883:—"We think the evidence before us insufficient to support the doctrine that pneumonia is a specific fever, whose chief local manifestation is the lung. Like all respiratory diseases, we find it prevailing in certain states of the weather. The great regulator of its frequency is season. It confers no protection on the individual, but rather increased liability to future attacks, and has no direct association with any specific disease; epidemic pneumonia is in part explained by atmospheric conditions, and in part by other agencies prejudicial to health." On the assumption that pneumonia is a local inflammation, how can it best be dealt with? Since the dawn of historic medicine, there has been but one reply: venesection, fully, promptly, and judiciously used. Of late the theory has been started that the tendency of the disease is towards recovery, and that it is best left alone. Admitting that some patients struggle through the attack unaided by art, how is the practical physician to decide if his patient is to be one of the fortunate few? Another class recommends stimulants, as if the heart were not already over-excited. Others use digitalis, a heart tonic, leaving out of consideration the fact that the *vis à tergo* is too great already for the safety of the lung. A fourth class resorts to veratria, aconite, and other sedatives, which are often so uncertain and slow in their action as to either kill the patient by their violence, or let him die by their delay in taking effect. The ideal thereapeutic agent for acute croupous pneumonia is one that will lessen the *vis à tergo*, and, at the same time, remove the blood on the venous side. to empty vessels; and to excite a certain amount of *vis à fronte*, which results not only in a temporary relief of the arterial stasis, but in an increased rapidity of current and a lessened force of circulation. These results are secured by blood-letting alone. Dr. Quinan quotes the experience of himself and others, and says that no one who has ever witnessed the benefit of depletion in the congestive stage of this grave disease could be induced to resort to any other remedy. He himself uses it in every sthenic case in its early stage, always with prompt relief, and sometimes cutting short the attack *in toto*. His cases show a mortality of one in seventeen. One was that of a young athletic man, whom he was called to in the first or congestive, stage of pneumonia. He at once bled him from the arm until the pulse softened and the dyspnœa ceased. The same evening the patient was convalescent, and able in a few days to return to work. The writer's plan is to institute one full bleeding as early as possible, following it up with tartar emetic in minute doses, together with calomel and opium, the application of poultices to the chest, and, in the later stages, blisters, with plenty of nourishment. In the later stages muriate of ammonia is administered, combined with tincture of opium and small doses of tartar emetic, the amount of the latter proportionate to the febrile movement. Dr. John Atlee, in his address before the American Medical Association, June 3, 1883, said, "I feel well assured that the almost total disuse of the lancet has cost many valuable lives. From a very large experience in its use, I am satisfied —fully satisfied—that if we depended more on the early use of the lancet in the congestive and inflammatory states of many diseases, our practice would be more successful than it now is." Again, Dr. Richard McSherry writes, "In the face of an appalling opposition, I believe blood-letting to be the most potent, if not the safest of anti-phlogistics."

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* *Lancet*, August, 1889.

† *Brit. Med. Jour.*, March, 1890.

‡ *Brit. Jour. of Dermat.*, May, 1889.

The communication, of which the above is a short abstract, takes the form of a letter to the *Philadelphia Medical and Surgical Reporter*, and presents a forcible expression of opinion. The writer mentions a young man who had passed a brilliant examination at the Navy Board, but who freely confessed that he had never seen a man bled in his life.

ARTICLE 747.

THE HÆMATOZOA OF MALARIAL FEVERS.[*]

DR. DON ENRIQUE FAJARNES gives a condensed statement of the existing state of opinion amongst the microbiologists in reference to the parasitic origin of intermittent fever. He observes that the conclusions flowing from Laveran's investigations were accepted by some and combated by many others, while the views of Klebs and Tomasi-Crudeli had currency for a time, during which their bacillus was described as the specific germ of paludal fevers. The discovery of hæmatoplasts with or without pigment in the blood of those suffering from ague, which was made by Marchiafava and Celli, seems sufficient to distinguish the malady, especially as their experiments have been confirmed and completed by Golgi, Mechnikov, Councilman, and other investigators. Klebs and other observers in the same field would not admit this. They held that these microbes are not living organisms, but different forms of hyaline degeneration of the red corpuscles of the blood, which had, indeed, been artificially produced in animals by Mosso and Schiavuzzy. Golgi, on his part, showed that the bacillus of Schiavuzzy is not a morbid product at all, and that it has nothing to do with paludal fever. Gentsinsky sustains that the organism described by Laveran (hæmatoficus malaricus) is the cause of ague. Ferran, on the other hand, affirms that he can nowhere find Laveran's parasite. Laveran has published a *résumé* of the works on the subject published by him during the last ten years, from which we take the description of the different microbes described in the blood of those affected with malarial fever

(1) Spherical bodies. These are the commonest. They are formed of a transparent hyaline substance. Their diameter varies from 1 to 8 mm. of mm. They exhibit amœboid movements. Laveran met them 389 times in 432 ague patients.

(2) Moveable filaments. Whip-like bodies. They are transparent, very fine, from 21 to 28 mm. of mm. in length. They exhibit lively and varied movements, glide along in the blood, and are sometimes united by one of their extremities to a spherical body. They are formed from the spherical bodies, and each of them may have two or three filaments disposed without any regularity or symmetry. Bouchard, Strauss, and Laveran consider the flagella as characteristic of paludal fever.

(3) Crescent-shaped bodies. Colourless and transparent, with black pigment granules in the middle, from 8 to 9 mm. of mm. in length, and 2 of breath.

(4) Hyaline bodies. Motionless, irregular in shape, and with pigment. He considers them to be bad forms of the spherical bodies.

(5) Tassel-shaped bodies. Spherical in shape, with pigment in the middle and segmented in a regular manner. Laveran assigns to them a secondary place, but Golgi gives much importance to them. Leucocytes of various forms are also observed in the blood, and they are supposed to represent different phases in the evolution of the same parasite. Leveran found in the blood of 432 patients affected with paludal fever:—

Spherical bodies alone in	266
Spherical bodies and flagellæ in ...	59
Crescentic bodies alone in	43
Spherical crescentic and flagelliform bodies in	33
Spherical and crescentic bodies in ...	31

The most of those who have studied the question, including Dr. Fajarnes, have accepted Laveran's conclusions. Since 1870, ten different species of microbe have been observed and brought forward by different observers as the essential cause of malarial fever, but the repetition of the names assigned to these organisms would scarcely be instructive to the reader. W. W. IRELAND, M.D.

ARTICLE 748.

EXPERIMENTAL TUBERCULOSIS.[*]

AT the meeting of the French Academy of Sciences, held on August 18th, a most important communication was made by Grancher (the well-known *collaborateur* of Pasteur) and H. Martin, who in November last had deposited with the Academy a sealed letter containing the announcement of their having succeeded, by a method of treatment, in arresting during long periods the evolution of Tuberculosis experimentally produced in rabbits. The recent publication by Koch, of the results of similar experimental investigations on guinea-pigs, has induced the authors to bring forward certain results obtained by them, although they would have preferred continuing their labours for some time longer before submitting them to the world.

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[*] *Revista de Medicina y Cirugia Practicas*, August 7, 1890.

[*] Grancher and H. Martin on Experimental Tuberculosis, with a Method of Treatment and of Preventive Inoculation. (*La Semaine Médicale*, August 20, 1890.)

All their experiments were performed on rabbits, and the method of inoculation was by intravenous injection, a method which kills with certainty in a space of time fairly short and of fixed duration, and causing definite lesions of the liver, spleen, and lungs. Tuberculosis caused in this manner being always fatal, there is the less risk of fallacy in drawing conclusions from the results of treatment or of preventive inoculation.

(1) *Treatment of experimental tuberculois after infection.*—The authors invariably proceeded according to a uniform plan. The rabbits about to be treated, and others, for the purpose of comparison, received the same quantity of a virulent culture diluted with a little sterilised water. The weight of each animal was carefully taken every day, and served as a guide to treatment. In the course of the last two years forty-two rabbits were thus experimented on, twenty-seven being treated and fifteen left untreated for comparison. The results were, in a general way, similar to those obtained with the batch of rabbits inoculated on the 31st December, 1889, particulars of which are as follows :—On that day seven animals received in the vein of the ear the same dose of a very virulent culture. One left untreated, for comparison, died on January 23rd, twenty-three days after inoculation. Five of those treated lived 126, 176, 176, 184, and 189 days respectively. The sixth was still alive at the date of publication, 229 days after inoculation. *Post-mortem* examination of the five that succumbed gave negative results. The spleen was small; the liver appeared healthy, and contained no bacilli. There were merely some embryonic cells in the perilobular spaces, relics of the tuberculous lesions in process of healing.

Preventive Inoculation.—The authors endeavoured to obtain degrees of virulence graduated to complete innocuousness, and although the results obtained were wanting in mathematical regularity they still could be applied in much the same manner as the dried spinal cords used by Pasteur in the treatment of rabies. No. 1 culture kills rabbits after a period varying from fifteen days to a month, and they made use of nine other degrees, gradually decreasing in virulence. Nos. 7 to 10, if re-implanted in nutritive media, will not develop, and they are quite without effect when inoculated into rabbits. Nos. 2 and 3 are fatal after a period varying with the power of resistance possessed by the animal, as are also Nos. 4, 5, and 6, but after still more varying periods.

One of the first experiments dates from August 27th, 1889. On that day five rabbits received, each in the vein of the ear, half a hypodermic syringe-full of culture No. 6, which is of very feeble virulence. On September 3rd they received No. 3, and on September 12th the same culture was again inoculated. On September 26th culture No. 2, and, finally, on October 15th No. 1 virulence were administered, while the same culture was inoculated into three other rabbits on the same day for comparison. These last died in 13, 18, and 21 days respectively with the classical lesions of experimental tuberculosis; the spleen enormous, the liver fatty, and the lungs studded with tubercular granulations. Of the other five rabbits three died, 55, 60, and 68 days respectively after the first inoculation, and presented the same lesions as the others; but the two remaining animals resisted, one for 148, and the other for 169 days, and presented after death comparatively slight tubercular lesions.

This result not being altogether satisfactory, the authors proceeded with their experiments, increasing the number of preventive inoculations, and finishing with No. 2 instead of No. 1 virulence. They thus obtained much more satisfactory results, and in one series of nine rabbits, inoculated on January 23rd with No. 2 virulence, after a course of preliminary inoculation with feebler cultures, five were still alive at the date of publication, seven months later, although No. 2 culture is always fatal in the case of unprotected animals. In a subsequent experiment, eleven rabbits received cultures Nos. 6, 5, 4, 3 and 2 in the interval between January 30th and March 25th, and on April 10th they, as well as two rabbits for comparison, were inoculated with No. 1. The two last died 23 and 30 days respectively after inoculation, but the eleven protected animals resisted much longer. Eight of them lived 67, 77, 88, 110, 115, 115, 118, 120 days respectively, and the remaining three were still alive at the date of publication, more than four months after the inoculation of the most virulent culture. The authors therefore claimed, on the one hand, to have succeeded in conferring on rabbits, by means of their treatment, a power of prolonged resistance to the most rapid and fatal form of experimental tuberculosis, and, on the other, to have given these animals, by means of their preventive inoculations, an immunity against the same affection, the duration of this immunity, however, having still to be determined. They refrained altogether from divulging any particulars of their methods, but remarked that the results of Koch have been probably obtained by methods entirely different from theirs, since he has made no allusion to protective inoculation, and that it was permissible, therefore, to hope that we shall have, some day, several means of fighting with success against the tubercle bacillus. W. A. FitzGerald, M.D.

Article 749.

HIRT ON HYPNOTISM IN MEDICAL PRACTICE.*

The following is a *résumé* of an address, entitled "Ueber die Bedeutung der Suggestions therapie (vulgo, "Hypnotismus") für die ärztliche Praxis," delivered by Prof. Hirt in the medical section of the Vaterländische Gesellschaft in Breslau :—The suggestion-cure has not been much examined into in Germany, the few who have studied the subject denounce its use in medical practice in no measured terms. The use of suggestion is as old as the human race; Eber's papyrus mentioning it goes back to about 1,500 years B.C., and suggestion has probably a place in the biblical wonders and cures. Its modern use dates from the end of the last century, when two men made themselves prominent; the one a cheat and liar, Joseph Balsamo (Count Cagliastro), the other at the least a quack, Frederick Mesmer. Erroneous and ridiculous as were the views of the latter as to the influence of magnets upon men, and on the existence of a magnetic fluid which he called "animal magnetism," and by which one man could influence another, one fact was brought to light to him, viz., that it was possible to induce a kind of sleep by long-continued strokings of the body, the face, or the clothed limbs. Whatever Mesmer's cures were, it is certain that learned bodies took them into consideration, and the French Government offered a considerable pension for his "secret," which offer was modestly declined.

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* *Wiener. med. Wochenschr.*, No. 27, 1890.

The smallest grain of truth is never lost entirely; the fact of this "influence" was repeatedly verified, and even in Mesmer's time the Abbé Faria reached the kernel of the subject in saying that no special passes were necessary, and that the cause of the influencing lay in the individual influenced.

In 1840 Braid, of Manchester, took up the subject, and proved that "passes" were unnecessary; he used, instead, some bright object, which the person under experiment gazed at steadily. He also first introduced the term "hypnotism."

Between 1870 and 1880 Charcot began his celebrated investigations into the hypnosis of hystero-epilepsy, and thoroughly described the "grand hypnotism," which was regarded as a neurosis by itself.

A little later, the Danish magnetizer, Hansen, travelled through Europe, and this induced several Breslau workers to examine the subject, *e.g.*, Heidenhain, Grützner, Berger. They made various observations and hypotheses, all now forgotten.

In 1866, Liebeault, in Nancy, published "Le sommiel provoqué," and Bernheim, also of Nancy, took up the subject, and wrote a work on suggestion and its curative action. He maintained the following opinions:—(1) The mere command of the operator sufficed to induce the hypnotic condition. (2) The so-called hypnosis is not a pathological condition, but may be induced in almost every person in the same manner. (3) This condition may be employed as a means of cure. Bernheim used this means so largely, and in such very different cases, that Mendel says, in his recent work, "Der Hypnotismus"—written for the public, by-the-by—"It is a wonder that there are any more sick people, or else the sick must be very lazy not to resort to some hypnotizer—not so hard to find." But the discomforting fact remained that, as Forel, v. Krafft-Ebing, Jendrassik, and others had shown, the patient, on waking up, carried out commands imparted to him when in the sleep-like condition, without any remembrance of the command itself. Hansen and the Breslau men had known this, and regarded it as a mere curiosity; but the question at once arose whether hypnotism, as a means of cure, ought not to be regarded as a two-edged sword, which might oftener wound than heal. [The metaphor is a bad one, for a sword is never used to heal anything with, except perversity.] In a word, was hypnotizing a disgraceful practice, unworthy of the physician, a practice which ought, perhaps, to be legally forbidden? Several German authorities, including Mendel, Meinert, and v. Ziemssen, have replied, more or less plainly, in the affirmative. Mendel says, "The hypnotic condition is a pathological one, belonging to mental pathology, an acute mental disease." After this, has anyone the courage to take up the subject? Can the scientific physician venture, even for the most benevolent reason, to bring any one into an acute mental disease? The answer must be apparently in the negative, but only apparently so; for if the matter is dispassionately considered with care, it will presently be seen that a middle course may be steered.

Prof. Hirt during the past year witnessed two series of experiments, one by Wetterstrand, of Stockholm, the other by Forel, of Zürich. In each case from sixty to one hundred persons were hypnotized daily, and when Prof. Hirt saw how a man might be robbed of his personality, and made to assume the character of a child, to laugh, to speak, to reckon, to write like a little child; or, again, of some wild animal, *e.g.*, a wolf, or changed from a truthful man to an unblushing liar, all this made him agree with Mendel in the danger of it. But when he looked at the undoubted benefits conferred in many cases (*cf. etiam*, Möbius, Sperling, Moll, Baierlacher, Freud, v. Renterghem, Hack Tuke, &c., besides Bernheim and Liebeault), it was felt that the subject deserved further investigation. In the winter season 1889-90, Hirt hypnotized 598 persons, all of them being ill at the time; 66 were under fourteen years old, and 532 were adults (244 men, 288 women), and is convinced of one thing, viz., that only a very slight degree of hypnotization is necessary. Bernheim makes nine grades thereof, Forel three, viz., (i) Somnolence,—the individual keeps the eyes open, and can still withstand suggestion; (ii) Hypotaxia,—a light sleep, the eyes being closed, but the patient remembers everything afterwards; (iii) Somnambulism [hypnosis is a better term], a deep sleep in which any commands may be imparted to the patient, who will implicitly perform them after waking, without any suspicion of their origin. The first of these degrees, viz., [illegible] mere somnolence, embraces the three first grades of Bernheim, and Prof. Hirt considers it quite sufficient for all therapeutical consequences. The patient is not sent to sleep, but merely deeply influenced for his good; any further influence is of no use at all in a therapeutical sense. The author would thus still agree with Mendel in denouncing artificial "hypnosis" in medical practice as dangerous, and to be rejected, and ends the first part of his address by saying that in over four thousand cases he never saw any evil results ensue.

[The latest work on hynoptism appears to be that by M. J. Luys (*membre de l'Academie de Médecine, médecin de La Charité*), entitled "Leçons cliniques sur les principaux phénomènes de l'hypnotisme dans leurs rapports avec la pathologie mentale." Hypnotism is here defined to be an extra-physiological experimental condition of the nervous system, an artificial neurosis developed in a predisposed subject. This agrees with Mendel's dictum, that it is an acute mental disease. In regard to the "waxen flexibility" of cataleptics, M. Luys makes the ingenious speculation, which, if true, is a brilliant addition to our knowledge, that the malleability of spirit evinced in the somnambulant condition is the exact psychological equivalent of the special plasticity of the muscular fibres (*flexibilitas cerea*) in the cataleptic condition. He employs rotating mirrors, isolated or combined—the idea was taken from the French mode of catching larks—and claims to have improved the condition of tabetic, hemiplegic, choreic, &c., persons, as well as hysterical, epileptic, and other neuropathic cases. He also freely acknowledges the danger of the method.—*Rep.*]

E. J. Edwardes, M.D.

Article 750.

KOCH ON THE PRESENT CONDITION OF BACTERIOLOGY.*

After having reviewed the earlier investigations on this subject, and the progress made during the last fifteen years, Koch admitted that the hope of isolating the micro-organisms of all infectious diseases had been disappointed, although much progress had been effected in that direction. The existence of very ancient infectious diseases, such as leprosy and phthisis, proves that bacilli preserve during the lapse of centuries their characteristic properties. In order to determine the nature of any particular organism, it is not sufficient to consider its isolated characters, fixed or variable, but it is necessary to note the greatest possible number of morphological and biological peculiarities which it may present. The presence of the bacilli of typhoid fever in the mesenteric glands, the liver, or the spleen, can give rise to no possible error, because similar bacilli are never found in these organs; but it is easy to be deceived as to the presence of the typhoid bacillus in the intestinal secretions, air, or water, because here one finds numerous micro-organisms which very closely resemble it. Koch's own study of the tubercle bacillus has shown him how necessary it is to be cautious in one's conclusions. Certainty is only acquired after a careful study of the reactions with aniline colours, by means of pure cultures, and by investigating pathogenic qualities. In this way he has satisfied himself that the bacillus of the tubercle of fowls differs in many points from that of other animals, as can be proved by cultivation and by inoculation.

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* Berlin International Congress. See *Semaine Médicale*, Aug. 6, 1890.

Recent researches have demonstrated the connection between bacteria and infectious diseases. When one has proved the fact that certain bacteria are constantly found in certain infectious diseases, that they are never found in other ailments, that they cannot exist outside the animal economy, and that they are capable of reproducing each its own particular disease, their etiological importance is established. This proof has now been acquired for tuberculosis, erysipelas, tetanus, and several diseases of animals. On the contrary, the fact that certain diseases cannot be reproduced in animals by means of pure cultures of certain bacteria is not sufficient to prove that these bacteria do not cause these diseases in man. This is the case with the bacilli of leprosy, Asiatic cholera, typhoid fever, diphtheria, and recurrent typhus.

The study of the following questions has made great progress; the parasitic nature of bacteria, their mode of penetration and evolution in the organism, the chemical bodies (toxalbumens) produced by them, the combination of several infectious diseases in the same individual, immunity, &c. The theory of phagocytes, on the other hand, is losing ground every day. The study of the action of light, and of heat, on bacteria has been productive of most important results with reference to prophylaxis. Direct sunlight destroys the tubercle bacillus; according to the thickness of the layer of culture exposed to the sun the bacilli die in a time varying from a few minutes to some hours. Even diffused daylight has a similar, although slower, action, cultures exposed to the light at a window being killed in from five to seven days. Moisture is necessary to all bacteria for their development, but they cannot quit the medium in which they have developed, or spread abroad through the atmosphere except as dust, so that in this way dryness is necessary for their propagation. Bacteriological studies have, to sum up, given rise to many disappointments, but have also given cause for much encouragement.

The fact that the micro-organisms of exanthematic diseases have not yet been discovered, proves that they must be sought for in some manner other than that which has succeeded with other maladies. It is possible that the organisms in question are not bacteria, but may rather resemble those found in the blood of persons suffering from malaria.

The practical results obtained are already considerable. Disinfection can be carried out in a more scientific and effectual manner. Water can be examined for germs of disease, as also milk and other foods, as well as the air of class-rooms and sewers. We can recognise with certainty, at its beginning, an epidemic of Asiatic cholera, and adopt the necessary prophylactic measures. The early diagnosis of tuberculosis has been facilitated. As regards direct therapeutic measures of use to the individual, there exist, as yet, only Pasteur's preventive inoculations against anthrax, rabies, &c. This last-named affection is, perhaps, not a bacillary disease, but its study has been entirely carried on by means of bacteriological methods. There are good grounds, however, for hoping that, even from the therapeutic point of view, bacteriology will see better days, more so in the case of somewhat chronic diseases than in those which run a rapid course. It is true that in the case of tuberculosis all the remedial agents hitherto employed have been without any direct success, but this is due to the fact that experiments have been made on human beings in the first place, instead of commencing by studying the influence of these agents first on cultures, and next on animals.

Koch has discovered, after numerous experiments, several substances capable of preventing the culture-development of the tubercle bacillus, a fact in itself of the highest importance. The substances which succeed best are the essential oils, certain synthetic bodies, such as naphtol beta, paratoluidine, &c., certain aniline dyes, such as fuchsine, methyl blue, gentian violet, auramine; next to these mercurial vapours, and the combinations of silver, and especially of gold, with hydrocyanic acid; thus the hydrocyanate of gold in the proportion of one in two millions prevents the multiplication of microbes. In animals these substances are of no avail, but lately, Koch has succeeded in finding substances which have proved active, even in animals. Guinea-pigs, to which a certain remedy had been administered, remained refractory to tubercular inoculation, and in the case of others, already infected with tubercle, the disease retrograded under treatment with this remedy. The speaker concluded by remarking that should it be confirmed that there exist substances capable of arresting the progress of tuberculosis in animals, we may hope eventually to discover remedies equally effectual in other diseases. W. A. FitzGerald, M.D.

Anatomy and Physiology.

RECENT PAPERS.

751. Savitzky, Dr. Semion L.—On the Action of Saccharin on the Assimilation and Metabolism of Proteids. (*St. Petersburg Inaugural Dissertation*, 1890, No. 30, p. 42; a preliminary note in the *Vratch*, 1889, No. 38, p. 836.

752. Ehlers Dr.—On the Elimination by the Urine of Large Doses of Iodide of Potassium. (*Annales de Derm. et de Syph.*, 1890, No. 5.)

Art. 751. *Savitzky on the Action of Saccharin on the Assimilation and Metabolism of Proteids.*—Notwithstanding the circumstance that the international literature on saccharin has already become fairly bulky, as well as pretty rich in discrepancies and polemics, such fundamental points, as the influence of the sweet substance on the assimilation of food ingredients and the systemic metabolism, have remained all through rather neglected. Anxious to initiate filling up the gap, Dr. Semion L. Savitzky, of Prof. V. A. Manassein's clinic, has undertaken a course of careful experiments on five healthy men (including Dr. Tchernykh), aged from twenty to thirty-two, his special object being to determine the effects of saccharin on the nitrogenous assimilation and metamorphosis. Each experiment lasted ten days, being divided into two equally long periods, during one of which the ordinary sugar was substituted for by saccharin in the daily dose of 0·2 and 0·4 grammes. The substance, in the shape of a 0·2 per cent. aqueous solution (twelve grammes to six litres of water) was invariably added to tea. In either of the periods the dietary consisted of tea, bread, butter, raw milk, and cutlet. The author has found that (1) the assimilation of proteids is somewhat increased under the influence of saccharin, the surplus of the nitrogen assimilated varying between 0·55 to 5·78 per cent. (2) At the same time, however, the nitrogenous metamorphosis considerably sinks, the decrease varying from 4·57 to 16·32 per cent. (3) Since saccharin (*a*) possesses the power of weakening and even totally inhibiting the action of non-organised ferments (diastase, ptyalin, pepsine, trypsin, etc.); and (*b*) leaves the system in an unchanged form, being eliminated through the kidneys alone—the said depression of the proteid metabolism must be attributed solely to an inhibiting action of the substance on those cells, which are taking an active part in the metabolic processes. In this regard biological effects of saccharin most closely resemble those of quinine. (4) It is obvious, then, that saccharin cannot possibly become an article of daily human food, for the said depression of the metabolism, when chronic or permanent, cannot fail in the long run to prove injurious to the consumer's organism. [Dr. Isaak J. Vinoküroff, also of Prof. Manassein's clinic, has recently investigated the effects of saccharin on the assimilation of fats. Of seven healthy young men experimented upon, in three the effects proved to be *nil*, while in the other four the assimilation improved on an average 1·3 per cent. *Vide* his *St. Petersburg Inaugural Dissertation*, 1890, p. 47; and the Manchester *Medical Chronicle*, May, 1890, p. 124. —*Reporter*.]

752. *Ehlers on the Elimination by the Urine of Large Doses of Iodide of Potassium.*—Dr. Ehlers analysed the urine of patients of both sexes and all ages. He observed that the amount of iodide of potassium eliminated by the urine was increased in proportion to the dose administered. Observation demonstrated the fact that symptoms of iodism, when they appeared, were caused by the retention of iodide of potassium in the system. The symptoms of iodism were found to disappear soon after the iodide was finally passed in the urine. They occurred when only half the amount given had been eliminated. The author's observations showed that four or five days after the patient ceased taking the medicine, the traces of iodide of potassium in the urine ceased. Iodide of potassium, on account of its facility of absorption and rapid elimination, appears to be an almost harmless remedy. In cases where doses of 20 gr. are administered iodide of potassium is eliminated in the proportion of 75 per cent. There is no danger to the system provided the excretive power be to some extent normal. Doses containing more than 20 gr. seem to be incompletely absorbed.

Surgery.

RECENT PAPERS.

753. Schuchardt, Dr.—On the Vermiform Process and Perityphlitis. (*Wiener. med. Wochenschr.*, No. 27, 1890.)

754. Kummel, Dr.—On the Treatment of Perityphlitis by Early Resection of the Vermiform Process. (*Ibid.*)

755. Oppenheim, Dr. — On Several Cases of Endocranial Tumour, locally Diagnosed during Life. (*Centralblatt. f.d. med. Wonensch.*, No. 30, 1890.)

756. Myles, Dr. T.—On Cholecystotomy. (*Dublin Journal of Med. Sciences*, Aug., 1890.)

757. Fowler, Dr.—On Sterilization of Catgut. (*New York Medical Record*, Aug. 16, 1890.)

758. Goldmann, Dr.—On the Artificial Cicatrization of Cancerous Ulcers by means of Skin Transplantation after the Method of Thiersch. (*Centralblatt. f. Allgemeine Pathologie*, Aug. 1. 1890.)

759. Delefosse, Dr. — On Antiseptic Internal Urethrotomy. (*Bull. gen. de Therap.*, Sept. 3, 1890.)

760. Darwin, Dr. R. T.—On a Case of Rupture of Spleen followed by Death within Half-an-hour. (*Indian Medical Gazette*, July, 1890.)

761. Ross, Dr. J. B.—On the Treatment of Abdominal Hydatids. (*Australian Medical Journal*, July 15, 1890.)

Art. 753. *Schuchardt on the Vermiform Process and Perityphlitis.* — At the recent congress of the German Surgical Society, Dr. Schuchardt, of Stettin, contended against the doctrine of fæcal concretions in the vermiform process as the cause of perityphlitis. There was often only an inflammation of the retrocæcal tissue. The diagnosis of physicians was extremely uncertain, and the *post-mortem* appearances were often highly misleading, owing to the complications present. The speaker had met with nine cases in the previous year. Of these one ended fatally from perforation-peritonitis, operation being declined; four cases quickly recovered; in three others an operation was made; but in none of these were any fæcal concretions in the vermiform process. In one case there was extensive fascial necrosis, the process here might be termed *paratyphlitis phlegmonosa;* moreover, *paraproctitis phlegmonosa* might be met with. Both kinds required early operation. Operation was resorted to if a swelling could be felt, even if no abscess was present, if the clinical signs of perityphlitis. viz., painfulness, stupidity, vomiting, and constipation did not quickly disappear in the first few days.

754. *Kümmel on the Treatment of Perityphlitis by Early Resection of the Vermiform Process.*—This paper was read at the same meeting. The indications for operation were not sufficiently considered. In chronic relapsing forms of perityphlitis, permanent cure might be obtained by operation; the disease always threatened death. A woman, aged forty-two, had six relapses; the first illness occurred fifteen years ago. In the neighbourhood of the vermiform process a

painful tumour was felt, the size of the thumb. On removal of the process, it showed at the apex and sides small slightly sealed openings, which would allow the passage of fæces on pressure. The next patient had been ill for fifteen years. Owing to a false diagnosis, both ovaries had been removed, and the uterus scraped. A moveable painful tumour was felt in the right side. On operation, the vermiform process was found ulcerated. The patient was cured in six weeks.

755. *Oppenheim on Several Cases of Endocranial Tumour, locally Diagnosed during Life.*—The first case showed the usual symptoms of cerebral tumour—headache, vomiting, and pupillary stasis. Further, pain in the back of the head and stiffness of the neck pointed to the floor of the skull posteriorly. The cerebellum was still more plainly indicated by the vomiting, giddiness, and characteristic derangement of co-ordination. Disturbances of the left acoustic, facial and fifth nerves, also, in slighter degree, of the vagus, glossopharyngeus, and accessory, showed that the tumour must implicate the trunks of these nerves. The associated left visual paralysis indicated the left half of the pons. The great hydrocephalus, which usually accompanies tumours of the cerebellum, caused anosmia by pressure on the olfactory nerves. The autopsy fully confirmed all this. In a second case, several tumours were present. Here also congestion of the optic papilla, pain in the back of the head, vomiting, disturbance of co-ordination and diminished hearing, indicated the cerebellum. After some months, aphasia was added (paraphasia and word-deafness). In explanation, the author assumed the existence of a tumour in the neighbourhood of the left island of Reil, or in the first temporal convolution. The autopsy showed a tumour in the cerebellum, and another in the left island of Reil, behind which lay a softening cyst. The third case was interesting because, besides other symptoms, including aphasia, there was paresis of the left half of the body. A tumour was diagnosed in the right hemisphere, and verified there on autopsy. The patient was left-handed, owing to an accident to the right hand at seventeen years of age. The tumour started from the right thalamus opticus, and sent processes beneath the *insula*, and into the medullary substance of the right temporal lobe, thus the speech-centre was affected. In the fourth case, the disease began with isolated agraphia, then followed aphasia and ataxia, right-sided sensory derangement, hemianopia (homon. bilat. dext.), vomiting, and headache chiefly in the left side. The tumour, a carcinomatous cyst, occupied the whole left parietal lobe.

E. J. Edwardes, M.D.

756. *Myles on Cholecystotomy.*—The great improvements introduced of late years in the modes of dealing with accumulations of biliary calculi are daily receiving wider recognition, and the operation of cholecystotomy has now been repeated sufficiently often for it to be classed among the regular procedures of modern surgery. One of the most recently recorded examples of the operation is described in the *Dublin Journal of Medical Sciences*, for August, 1890, by Dr. T. Myles, F.R.C.S.I., the patient, a woman about sixty years old, being almost in the last stage of collapse from pain and exhaustion. When the operation was performed, five-and-twenty calculi were removed through an incision dividing the right rectus muscle and reaching the gall-bladder, which latter organ was emptied by aspiration before being opened for the evacuation of its solid contents. A single stone was with some difficulty removed also from the common bile-duct, by pressing it back into the bladder; and after all the foreign bodies had been cleared out, the wound was closed by deep sutures through the peritonæum alone, and superficial ones through all the remaining parietal structures. The cut-edges of the gall-bladder were fixed to the upper end of the wound, thus leaving a fistulous opening into the viscus, a plan of procedure which Dr. Myles urges the necessity of following, since he does not believe the bile is likely to find its way immediately along the cleared duct into the intestine. The reasons he assigns are, first, that it is never absolutely certain the channel is wholly cleared, especially since the narrowest portion of it, and that at which a stone is most likely to be arrested, is also the most inaccessible; and, secondly, that the walls of the duct must be paretic for some days after the operation, and thus unequal to the task of propelling the bile into the duodenum. There is, further, no risk of a permanent fistula resulting from the external wound being incompletely closed, for it has been clearly shown that the internal channel being once freely pervious, the external wound heals without difficulty.

757. *Fowler on Sterilisation of Catgut.*—The importance of employing materials for sutures and ligatures, in surgical practice, of a kind that may be depended on not to be a source of wound-infection, is universally admitted in the present day; and it is the aim of every operator to be provided with threads so prepared that their use shall not be attended with the least possible risk of mischief. To this end many elaborate methods of rendering silk and catgut germ-free, and for preserving them so, have been devised, Sir Joseph Lister himself having given the subject especial and prolonged consideration. In many respects the chromicised catgut which this great surgeon introduced to the profession is the most trustworthy form of ligature in general use, but its preparation is a tedious and troublesome process; and, invaluable though it is, it is not too much to say that it would probably be superseded by a material that could be equally trusted if made available at a less cost of time and labour. It seems, from a paper published in the *New York Medical Record* for August 16th, that a simpler plan of effectually sterilising catgut has been devised by Dr. Fowler, of New York, whose process consists in boiling the substance in ninety-seven per cent. alcohol for a period of one hour. By this means the fat, which is present in even the chromicised gut, is completely removed, and the whole thickness of the fibre is most effectually sterilised. A number of experiments were conducted, by Dr. Fowler's direction, to test the germicidal effects of the alcohol treatment; and it was found that though certain germs could resist fifteen and even thirty minutes' boiling, yet none survived if submitted to the process for a complete hour. Nor would pieces of catgut so treated yield any result when planted in sterilised culture media; and, however often repeated, the same negative conclusion was arrived at. The process of sterilising is an extremely simple one, the catgut being merely wound upon small wooden reels, which have been previously thoroughly cleansed by boiling in soda. Dr. Fowler asserts that the catgut is not changed in any material way by the treatment he adopts for its purification; the sutures may, he thinks, possibly hold a little longer, but this can hardly be regarded as a drawback, while in many cases it becomes a distinct advantage.

Chas. H. Wade.

758.—*Goldmann on the Artificial Cicatrization of Cancerous Ulcers by means of Skin Transplantation after the Method of Thiersch.*—The method of Thiersch, which consists in implanting on a granulating surface, small pieces of skin which contain only epidermis and the most superficial layers of the corium, has been applied to the cicatrization of cancerous ulcers by Kraske, and subsequently in Billroth's clinic. The writer has had an opportunity of examining two such cases, and gives very elaborate histological details with drawings. He arrives at the conclusion that the epidermis, the cells of which possess a very great amount of vitality, is so effectually nourished by its lymphatic circulation that it can take root on carcinomatous ulcerating surfaces; that transplantation succeeds best in the case of tumours which are highly vascular, and that the pieces of skin to be made use of should be cut as thin as possible.

W. A. FitzGerald, M.D.

759. *Delefosse on Antiseptic Internal Urethrotomy.*—Years ago urethrotomies were not unfrequently followed by febrile symptoms, attributed to the passage of urine over the wound and the absorption of its tonic contents. The use of the *sonde à demeure* did away with a large proportion of the risks, but did not entirely obviate them. Since the introduction of the antiseptic method, three factors have been incriminated as the possible source of the mischief: (1) Bacteria contained in the urine and absorbed by the wound, (2) urethral bacteria, and (3) germ introduced by catheterisation. The author endeavours to render the operation aseptic by administering to the patient, for three or four days previously, boron and boracic acid, in quantities corresponding to the condition and amount of the urine excreted daily. When possible, the urethra and bladder are washed out with a solution of boracic acid. Half-an-hour before the operation the patient is given five grains of sulphate of quinine, the dose being repeated immediately after the operation. The penis is washed with a sublimate solution (1 in 500), and is enveloped in compresses steeped therein. Urethrotomy is performed with carefully asepticised instruments, and after section a catheter is left in for about forty-eight hours. This allows the bladder to be washed out forthwith, and this is repeated twice daily. With these precautions, the author claims urethrotomy has been made a comparatively innocent operation.

760. *Darwin on a Case of Rupture of Spleen followed by Death within Half-an-hour.*—The patient was a young apparently healthy and robust-looking Sepoy, about twenty-one years of age, who, after getting into camp on 24th February last, at the end of a short march, and while trying to get on the bare back of a horse, he did it clumsily and fell on his side. He soon got up, and followed the pony. He got about one hundred and fifty yards, when he felt queer and sat down, vomited twice, felt exhausted and looked pale. He was brought in by some of his comrades, when he was quite collapsed and looked as if he could not hold out much longer; face deathly pale, eyes sunken, no pulse, cold sweat. He was given some aromatic spirit of ammonia, and asked where he felt pain. He passed his hand over his left side and abdomen; a comrade put his hands under the painful part to support him; the patient half-lifted himself and struck out angrily at his friend, pushing him away. He then sank back, and while being conveyed to the camp a short distance off, he had an involuntary evacuation of healthy-looking semi-consistent fæces. Soon after the patient was laid down, and while in the act of giving him some more diluted spirits of ammonia, he made a few spasmodic gasps for breath and died. *Post-mortem examination.*—On opening the body about half-an-hour after death, there was dark-looking fluid extending upwards under the margin of the diaphragm, which had been also pushed upwards and below to a little above the level of the umbilicus; the peritonæum was somewhat tense, and an accidental nick into it allowed a quantity of sanguinolent serum to escape. There was a good deal of thickly clotted blood covering part of the liver, the stomach, and intestines to left side as far as about midway between the costal arch and umbilicus. On removing this clot, more clotted blood was found below. The author carefully removed the spleen; but in trying to get it out he had to pass his hand well to the back and up the sides of the ribs. On examining it, two distinct points of rupture of its substance were observed; these were situated, one below the other, on its upper and posterior surface at the upper curved portion of the organ, and about an inch apart; the lower rupture was the larger of the two, and was about 1½-in. long and ½-in. deep. There were no means of weighing the spleen, but it did not look much more than twice the size of an ordinary healthy one; the borders were rounded, substance firm, congested; a small area immediately surrounding each rupture was soft and friable; liver somewhat enlarged, its left anterior border crossing the middle line slightly, substance firm and apparently healthy. Lungs collapsed, pale looking, and occupying back and upper part of thorax. Substance healthy. Heart healthy; heart and lungs pushed upwards.

761. *Ross on the Treatment of Abdominal Hyatids.*—Although many people hold that Trousseau's method accomplishes the safe removal of hydatids from the abdomen, yet actual practice proves otherwise. Septic peritonitis, as indicated by abdominal distension and elevated temperature, is found in many cases to follow the introduction of pins. Whenever pins are introduced with the view of causing adhesions, that object can be achieved in two ways only, either by the presence of germs on the pins that set up adhesive processes, or else by a leakage of fluid of the same properties. Perfectly sterile pins cannot give rise to adhesions. On the other hand, by introducing septic pins, or by a leakage of irritative fluid, a peritonitis will ensue, the control of which is out of the hands of the operator. The aseptic era, however, has given us, in von Volkmann's method, the ideal execution of Trousseau's original plan. It is now an established fact that there is no more danger in opening the peritoneal cavity than in cutting off a finger; hence that operation may be used for purposes of diagnosis. These facts being granted, the writer asks why uncertain or even dangerous methods should be adopted for the production of adhesions, when we are able to secure them by an open and scientific operation. It has been maintained that Trousseau's method is easily performed, and therefore best suited to the greater number of operators. The writer asserts that he can perform von Volkmann's method in less time than that occupied in introducing the needles by the other plan. Great operative skill is not necessary. Anatomical knowledge and strict asepsis are the two indispensable requirements. In following von Volkmann's method, the operator has the great advantage of being able to see what he is doing. The abdominal cavity is freely opened, and

the cyst extensively exposed. A week later it is incised, and there being by that time firm adhesion to the abdominal parieties, peritonitis is rendered impossible. Six successful cases are reported, in none of which the temperature reached 100°, nor was there any sign of peritonitis. In one case there was a cyst of left lung, which was reached by resection of a rib, followed by pneumothorax. The writer had twice to make a way through the substance of the liver, when he used Paquelin's cautery, and found no difficulties. The track is kept easily open, and the discharge of bile is harmless, and soon disappears. Dr. Ross has opened two cysts situated on the convexity of the liver, one from above, and the other from below the diaphragm. He prefers the higher operation. In opening below the diaphragm, the latter is apt to block the tube, and to greatly interfere with drainage.

Medicine.

RECENT PAPERS.

762. O'Dwyer, Dr. J.—On the Re-expansion of a Collapsed Lung—an Apparent Paradox. (*Transactions of the American Pediatric Society*, vol i.)

763. Gangolphe, Dr. M.—On the Employment of the Permanent Tube in Cancerous Strictures of the Œsophagus. (*Lyon Médical*, 1890, No. 28.)

764. Pel, Prof.—On the Diagnosis of Abscess of the Liver.

765. Benczur, Dr., and Jonas, Dr. — On Thermopalpation. (*Deutsches Archiv. f. klin. med.*, 46, H. 1.)

766. Davis, Dr.—On the Treatment of Local and General Peritonitis. (*Gaillard's Med. Jour.*, July, 1890.)

767. Mauriac, M.—On a Severe Case of Gonorrhœal Arthropathy. (*Ibid.*)

768. Barthelemy, Dr.—On Symptomatic Eruptions of Influenza. (*Ibid*, 1890, No. 5.)

769. Schwimmer, Prof.—On Influenza and Affections of the Skin. (*Orvosi Hetilap.*, 1890, No. 14; *Ibid*, vol. xi., No. 2.)

770. Hansen, Dr. — Is Leprosy a Dying-out Disease, and is it Hereditary? (*Virchow's Archiv.* Bd. 120; *Ibid.*)

771. Davis, Dr. E. P.—On Hydrocephalus. (*Philadelphia Med. and Surg. Reporter*, August 2, 1890.)

Art. 762. *O'Dwyer on the Re-expansion of a Collapsed Lung—an Apparent Paradox.*—The following is a summary of the paper:—It is still a mystery how "a lung that has been completely collapsed, and compressed, becomes so fully and completely re-inflated, that in after years it is impossible to distinguish any difference between the two sides, and that the principal part of this inflation takes place while free communication exists between the pleural sac and the atmosphere." The theories usually advanced in explanation are:—(i) The small size of the opening and partial exclusion of air dressings; (ii) the presence of old adhesions, or formation of new ones; (iii) inflation from the opposite lung during coughing. As to the opening, this is often free, and kept free, with only a layer of oakum over it. Again, old adhesions seldom exist in young children; the pleural surfaces are separated at all points. The elastic force of the lung is very strong; "its elastic tissue is always on the stretch until every particle of air is driven out, and the alveolar walls are brought in contact." "Hutchinson and others have estimated that in the adult male it offers a resistance equal to lifting a weight of fifty pounds with every inspiration." Lastly, as to forced expiration driving air in from the other lung, the dilating power of a cough is certainly very great, as is seen in hernia of the lung, but the coughing would have to be as frequent, or almost as frequent, as normal breathing. Now, (i) some children with empyema cough very little; (ii) coughing would be useless if both pleural cavities were open together, as in Dr. Huber's cases of double epyema. In the latter case, it is difficult to understand how life can be sustained, even for a moment. Dr. Weissberger (*Berliner Klin. Wochenschr*, Feb. 24, 1879) "takes it for granted that the positive expiratory pressure, aided by the negative pressure of inspiration, produces sufficient expansion of the contracted lung to allow adhesions to take place above; and then endeavours to demonstrate the manner in which the inflation extends downwards, where the pleural surfaces are more widely separated. In other words, he assumes the accomplishment of the very steps of the process that are the most difficult to explain or understand, and this is the weak point in all these theories." In a previous paper (*N.Y. Med. Journal*, March 9, 1889), the author assumes the existence of a chemical attraction in the lungs, not nutritive, but between the oxygen of the air and the hæmaglobin of the blood. Draper has already said that there must be chemical attraction between the tissue and the blood, for the action of the heart cannot drive venous blood through the capillaries. In this case the attraction is a nutritive one. Flint says: "The distention of the heart in asphyxia is, therefore, due to the fact that unaërated blood cannot circulate in the systemic capillaries." Another factor that may aid in preventing the rapid collapse of an active lung is the vaporization of water in the capillaries; the adult exhales about a pint of water per diem, and a cubic inch of water represents a cubic foot of aqueous vapour—a vast increase. [*Discussion.*—Dr. Northrup quoted Dr. S. West (London Bradshawe Lecture). "The fact, therefore, that the pleural cavity may be laid open, and yet that collapse of the lung, with subsequent pneumo-thorax, may not occur, must be accepted, and an explanation sought." This explanation Dr. West finds in the cohesion between the two pleural surfaces, stronger than that between the skin and the tissue beneath, and Dr. West's experiments seemed to support this. The speaker had made three series of experiments to determine this question, and said: "My first conclusion is that Dr. West was wrong. His experiments might work with discs of wood or membranes, but not with the pleura." But to the question,—"Will the lung expand entirely or in part, the chest-wall remaining open?" Dr. Northrup did not give a direct reply. Practically, the opening is always closed by the dressing, as by a valve, permitting discharges outwards, but preventing air from passing inwards. Dr. Carr quoted Dr. Douglas Powell, who maintains that normally the contractility of the lung is exactly balanced by the elastic resilience of the chest-wall, the executive thoracic resistance (*Med. Chir. Transac.*, vol lix.); also Fagge, on the "Changes of the Air," and Dr. Welch, of Baltimore, who seemed to deny that expansion could take place with an open chest-wall. The President (Dr. Jacobi) remarked that it was a fact that expansion could then take place, a fact which could not be gainsaid. We inhale a great deal more air than we really require, and it was the residual air from the other lung that caused expansion. In conclusion, Dr. O'Dwyer could not accept this. "There can be no inspiratory force that will have any effect on the contracted lung. I claim that there is no other way of explaining the inflation of a collapsed lung except by the mechanical effect of forced expiration." This last statement appears to be in contradiction to Dr. O'Dwyer's previous remarks, and the question remains as mysterious as before.]

763. *Gangolphe on the Permanent Tube in Cancer of the Œsophagus.*—Cases are reported by the author in which the sound remained in the œsophagus for four, five, and even six months. Food was thus easily administered to patients, whose lives were thus prolonged and rendered more comfortable. In the following case the patient carried both a tracheal and an œsophageal tube at the same time. A woman, aged forty-five; tube No. 5 passed into the œsophagus on Dec. 19; cachectic and emaciated. She was unable to swallow solids. Liquids regurgitated with mucus. Unsuccessful attempts to pass bougies and tubes, as violent muscular spasm was induced, even by a finger in the pharynx. Under an anæsthetic, a stricture was made out at the junction of the pharynx and œsophagus, and by patience and care a No. 5 tube was passed into the stomach. Feeding was now easy, and soon No. 8 was passed, then No. 12. On Jan. 12, No. 16 was passed, then No. 20; but these sizes were found to be too large to be supported, and No. 8 was returned to. The patient improved in health. On March 2, dyspnœa occurred with suffocative attacks, and it was supposed that the recurrent nerve was involved by the tumour. Tracheotomy was performed, and the patient now carried two tubes, a tracheal and an œsophagral. All went smoothly for some time, but on May 19th, seventy-three days after the tracheotomy, she died suddenly in the middle of the night, owing to the falling in of the tube into the trachea. But for this accident she would have lived much longer. The autopsy revealed a tumour at the upper end of the œsophagus, involving both recurrent nerves. It was not ulcerated; the neighbouring parts were not inflamed. Tubage has given better results than gastrostomy, even in the severest cases when liquids could not be swallowed. The indications for permanent intubation are variable. It has been called a blind procedure, anti-surgical, dangerous. This cannot be said of intubation in recent cases of cancer of the œsophagus, when liquids are still swallowed easily, still less when the course is rapid, and there is much spasm. Not only must the caprices of the œsophagus be borne in mind, but also the hand of the operator. Patience, perseverance, and gentleness are absolutely necessary to triumph over all the obstacles. Even in old cases, with feeble subjects, and when there is complete dysphagia catheterization should be tried. In many such cases the stricture is found *post mortem* to admit the passage of a larger tube than was expected. The great point to insist on is the use of intubation at an early date, because emaciation, dysphagia, and extreme cachexia have set in, and when the operation is easy and inoffensive, and the sound is well tolerated. The patient will always prefer this to intubation. Sometimes the catheterization has to be intermittent, according as it is tolerated. If the trachea and bronchi are involved, as shown by the attacks of coughing and the sanious and fetid expectoration, there will be risk of passing the sound down the trachea; but this is not an absolute contra-indication, in recent cases especially. Intubation is in favour amongst English surgeons. The catheter should be long, soft, and well oiled inside and out. It may be made sufficiently resistant by wires of different metals, which can afterward be withdrawn. Hæmorrhage is more or less a contra-indication. The author thus formulates his conclusions:—(1) Gastrostomy may be considered a relatively benign operation, but the end proposed is only imperfectly attained. (2) Artificial feeding after gastrostomy appears to be insufficient to keep up nutrition in cases of cancer of the gullet. (3) Feeding by permanent intubation appears infinitely preferable. (4) This mode is especially advisable in recent cases, and even when the respiratory passages are involved. (5) Abundant spontaneous hæmorrhages constitute a contra-indication to frequent catheters, and sometimes to the permanent sound, but in such cases the latter has given better results than gastrostomy. (6) The catheters should be of green or red caoutchouc, with wires or whalebones. (7) Short tubes may be used at an early stage of the disease. (8) Catherization should always be done with great precaution. (9) Anæsthesia should not be resorted to, generally speaking. (10) Gastrostomy should be reserved for exceptional cases, in which the invasion of neighbouring organs, repeated hæmorrhages, and the impossibility of passing a catheter after repeated trials, prohibit all idea of feeding artificially by the œsophagus.

764. *Pel on the Diagnosis of Abscess of the Liver.*—The following is a summary by Prof. Pel, of Amsterdam, of his paper read at the recent International Congress:—(1) The diagnosis of abscess of the liver rests essentially on the objective signs, the subjective symptoms, and the etiology. Besides the chronic hectic fever, the liver is always enlarged; this enlargement is characterized, (*a*) the increase upward of the right lobe, (*b*) the convexity of the line of demarcation between liver and lung, (*c*) the immobility or very restricted change of this line, either during respiration or when the patient lies on the left side. The most important subjective symptoms are pains in hepatic region radiating backward and to the right shoulder, psychical depression, anorexia, insomnia, and emaciation. As to the etiology, some factors are significant (tropical dysentery, residence in tropics, gall-stones, inflammation in region of portal vein, typhoid fever, hydatids, injuries, &c.), but it must be insisted on that in not a few cases of non-tropical abscess of the liver no cause whatever can be assigned. Lastly, an abscess of the liver may be quite withdrawn from physical diagnosis by its small size and central position.

765. *Benczur and Jonas on Thermopalpation.*—This method of diagnosis is based upon the fact that the temperature of the skin of the thorax and abdomen is not always the same to the feeling-finger, but is higher over tissues which contain air than over solid tissues. Thus by this method not only may the limits be drawn between air-holding and solid organs, but pleuritic and pericardial ensudations, infiltrations, aneurysms, abdominal tumours, may be mapped out. The "relative" cardiac and hepatic dulness may also be known. No specially developed sense of temperature beyond the average is required for this method, which is confirmed by the thermo-galvanometer and differential air-thermometer, also by specially constructed mercury thermometers.

E. J. Edwardes, M.D.

766. *Davis on the Treatment of Local and General Peritonitis.*—Dr. Davis observes that pathological study has pretty well settled the following points:—Simple peritonitis, when caused by a sufficient quantity of a chemical irritant, will produce death by the extent of the inflammation. Simple inflammation may terminate in septic peritonitis, by producing a weakened condition of the walls of the intestines, which permit the passage of septic germs from the intestinal canal into the peritoneal cavity. While pathological germs in a small quantity may be absorbed by the healthy peritoneum, without producing peritonitis, the same quantity combined with a chemical irritant may produce a violent inflammation. Large quantities of septic fluids and microbes always produce suppurative peritonitis; yet a small quantity of either may be absorbed and destroyed, unless the peritoneum has been weakened by antecedent pathological changes. A septic fluid may gravitate into dependent parts of the peritoneum, and become shut up, either by plastic inflammation or by a coil of intestine, and thus be prevented from producing diffuse peritonitis, but after a time this may rupture and produce death from general peritonitis. The germs of septic peritonitis will be found in the kidneys and other organs of the body, and in greater quantities according to the extent and duration of the inflammation. The condition of the peritoneum and the nature and quantity of the septic product will determine the rapidity of the inflammation, which usually ends in from forty-eight hours to six days, but death may be produced in a few hours from shock. Tubercular inflammation is always slow in its progress. From a consideration of the foregoing principles, the following indications for treatment must be arrived at:—(1) Promote absorption of the inflammatory products of simple peritonitis as rapidly as possible, and thus relieve the inflammation and prevent the possibility of septic peritonitis. (2) In the early stage of peritonitis, whether simple or septic, where the cause cannot be determined, hasten the absorption of inflammatory products, etc., with purgatives. (3) When medical treatment fails to give relief, septic fluids should be removed by operative procedure. (4) In localized peritonitis—with circumscribed pus formation—the pus should be removed and the abscess cavity drained. (5) In acute septic peritonitis, operative procedure must be adopted early, or there will be no chance of recovery offered by the operation, as the inflammation will become more extensive the longer it continues, and, too, there will be so great a quantity of septic germs absorbed into the system, that death will result from toxæmia, even though the local inflammation should be remedied by a late operation. The first two indications for treatment are best met by free purgation, with Epsom or Rochelle salts in tablespoonful doses, repeated hourly, till the bowels act six or seven times. If the stomach rejects salts, then calomel may be used. This purgative treatment frequently proves a very valuable diagnostic measure. If it does not succeed, we know that an operation is generally indicated. It is very important not to resort to the free use of morphine unless an operation has already been decided on, and then given to relieve pain and lessen shock. The author lays down the rule, that if the symptoms of a local peritonitis in the cœcum do not begin to improve by the fourth or fifth day from saline treatment and local applications, an incision should be made down through the muscles, and the peritonæum dissected up, until a place is found where the abscess is attached, and then opened. A number of cases are cited by the author in which he shows the advantages of operating early in these cases. The following plan of treatment should be adopted in cases of acute general suppurative peritonitis, which will allow of the complete exposure of the abdominal cavity, the removal of the cause of inflammation, and assist in restoring the functions of the intestines:—The abdomen is opened in the median line; the cause, if found, is removed; the cavity thoroughly douched with hot water; all adhesions broken up, and, if tympanites is not marked, drainage-tubes are introduced, through which the cavity may be washed out, as indications require. If the cause be found in the region of the cœcum, the drainage-tubes should be introduced through a second incision in the right illiac region.

RICHARD NEALE, M.D.

767. *Mauriac on a Severe Case of Gonorrhœal Arthropathy.*—During the course of an attack of gonorrhœa of average severity, great swelling of one elbow occurred rather suddenly with inflammatory signs of so marked a character that the affection might have been mistaken for a subcutaneous phlegmon. There was also intense periostitis of the ends of the bones. The patient recovered, but with almost complete ankylosis and marked muscular atrophy. The gonorrhœa continued unaltered throughout the course of the joint affection. In connection with this subject, M. Mauriac remarkes that he has almost entirely given up internal treatment in gonorrhœal rheumatism. He has found that the drugs useful in ordinary rheumatism, particularly the salicylate of soda, have no effect in the gonorrhœal form. Iodide of potassium is prescribed in cases in which there is a gouty tendency.

ARTHUR COOPER.

768. *Barthelemy on Symptomatic Eruptions of Influenza.*—M. Barthelemy has observed in the course of epidemic influenza a certain number of common cutaneous affections: furunculus, anthrax, subcutaneous abscess, purulent bullæ, small swellings on the eyelids, herpes either of the mucous membrane or of the skin, zona, indications of eczema, etc. Out of a total of 219 patients, the author observed in 14 cases cutaneous rashes, which he believes himself justified in considering to be true symptoms of the infection of influenza. He considers them analogous to the rash which the poison of small-pox, and even that of measles, causes in the skin before producing their respective characteristic eruption. The author observed the morbilliform type eight times, the scarlatinal form four times, one case of erythematous eruption exclusively developed around the follicles which ended in an abundant desquamation, and one case of eruption of vesicles scattered on each side of the neck, on the nape, and the upper part of the back. In 19 cases of robust subjects, aged eighteen to thirty-five, the author saw a generalized redness of the skin, marking the commencement of the influenza infection, ending in profuse sweats. This redness disappeared somewhat rapidly twenty-four to thirty-six hours after the commencement of the disease. It afterwards developed like a typical influenza.

769. *Schwimmer on Influenza and Affections of the Skin.*—Professor Schwimmer has observed the following diseases occurring after influenza: (1) Herpetic form. Usually it was found on the lips and nostrils. Herpes iris and herpes circinatus were observed in two men. (2) Erythema. Erythema multiforme took place in three cases. (3) Morbilli occurred in two

cases, both of which were children, whose ages were twelve and fourteen. A measles-like exanthem, with moderate feverish symptoms, made its appearance after influenza. In the case of three women, who had not previously suffered from skin diseases, psoriasis vulg. acut. occurred shortly after influenza.

770. *Hansen.—Is Leprosy a Dying-out Disease, and is it Hereditary?*—As to whether leprosy is a dying-out disease, and whether it is hereditary, Dr. Hansen considers himself justified in believing that the transmission of leprosy by contagion is proved. The author states that it seems to him that the contagiousness of the disease is well shown by the decrease in the number of lepers in Norway, which has resulted from the measures taken to secure isolation. He also considers that the extension of the disease in the Sandwich Islands supports this view. Heredity does not explain either of these occurrences. In the year 1856 there were, in Norway, nearly 3,000 lepers. Now there are scarcely more than 800. Every improvement, both in personal and domestic cleanliness, leads to the diminution of the disease, and, from observations in North America, the author is led to believe that contagion is there prevented by the greatest cleanliness. He considers it fairly well proved that leprosy is not a hereditary disease.

771. *Davis on Hydrocephalus.*—The report of a clinical lecture furnishes some interesting remarks on hydrocephalus. A child, nine months of age, born with easy labour. For first six months fed by breast and by cow's milk. Two months ago head was noticed to be enlarging. The question rose whether the pathological condition was due to hydrocephalus or rickets, a point not easy to determine in early stages. In this case there was doubt. The narrowing of the head at the temporal region was suggestive of rickets. The veins are enlarged all over head, and are increased when the child cries. The vertex is enlarged, with moderate bulging of the skull. One good point in diagnosis is to take cranial measurements from time to time. Another point is the peculiar staring appearance of the eyes in hydrocephalus, due to displacement of the eye-ball by bulging of forehead and displacement of orbital walls, causing more than the normal amount of white to be shown. A still further point is the absence of rachitic enlargements in other parts of the skeleton, as, for example, the articulations of the ribs or the joints generally. Hydrocephalus means an accumulation of fluid within the cranium. It may be *external* between the dura and the skull, or *internal*, between the membrane and the brain. The external variety is almost invariably secondary; the internal congenital, or due to the irritation of tubercule, or of a tumour. The head sometimes increases at the rate of three quarters of an inch daily. The symptoms are, an increase in the size of the head and a gradual decrease of the intellect. Idiocy and convulsions usually supervene, and two or three years is the general limit of life. When the disease is recognised fluid may be removed by an aspirating needle, introduced by one of the lateral angles of the anterior fontanelle. The head may be then strapped with adhesive plaster, but this proceeding requires great caution; an elastic bandage is preferable. Other plans of treatment, such as iodide of potassium, counter-irritation, and setons are of little use. There may be a combination of intra-uterine rickets with malformed skull and subsequent hydrocephalus. In extreme cases the weight of the head cannot be supported by the child. Death usually results from coma and convulsions, from pressure on the fourth ventricle. Syphilis may complicate hydrocephalus, and brain-tumour occasionally produces it. Dr. Davis anticipates a future for the treatment of this disease. In these days of brain-surgery it is perfectly possible to tap the ventricles of the adult brain. A case in point is mentioned where an intraventricular abscess following injury was successfully tapped in a policeman. If this can be done in the adult head, there is no reason to doubt we can do the same in a child.

Pharmacology and Therapeutics.

RECENT PAPERS.

772. Dujardin-Beaumetz, Prof.—On the Therapeutic Value of Strophanthus. (*Therapeutic Gazette*, July, 1890.)

773. Haines, Dr.—On Cascara in Tertiary Syphilis. (*Therapeutic Gazette*, July, 1890.)

774. Marano, Dr. — On Electricity in Joint Diseases. (*Australian Medical Gazette*, July, 1890.)

775. Babtschinsky, Dr.—On the Treatment of Diphtheria by the Inoculation of Erysipelas. (*Central-blatt f. Allgemeine Pathologie*, August 15, 1890.)

776. Teissier, Dr.—On the Treatment of Typhoid Fever. (*La Semaine Méd.*, Aug. 10, 1890.)

777. Dessan, Dr.—On Antipyrin in Diseases of Children. (*Archives of Pediatrics*, August, 1890.)

778. Waugh, Dr.—On Orexin. (*New York Times and Register*, August 16, 1890.)

779. Du Castel, M.—On the Treatment of Orchitis by the Application of Methyl Chloride.

780. Quinquaud, Dr.—On Consecutive Eruptions caused by the Ingestion of Uric Acid

781. Prevot and Binet, Drs.—On the Effect of Iodine and the Iodides on the Blood-pressure. (*Rev. med. de la Suisse Romande*, August 20, 1890.)

782. Rose, Dr.—On the Treatment of Erysipelas of the Body and Extremities by Continuous Tepid Baths. (*Medizinische Monatsschrift*, 1890, Heft 1; *Monats. f. Prakt. Derm.*, vol. x., No. 10.)

783. Lassar, Dr.—On Aristol in the Treatment of Psoriasis. (*Deutsche Med. Wochenschr.*, 1890, No. 12; *Ibid*).

784. Fox, Dr.—On the Apparent Cure of a Case of Leprosy. (*New York Med. Jour.*, Feb. 15, 1890; *Ibid.*)

785. Kollath, Dr.—On a Case of Lupus Facialis cured by Intercurrent Erysipelas. (*Deutsche Med. Wochenschr.* No. 16; *Ibid*, No. 11.)

786. Neisser, Dr.—On Aristol. (*Monats. f. Prakt. Derm.*, vol. x., No. 12.)

787. Yvon, Dr.—On Antiseptol (Iodosulphate of Cinchonine) as a substitute for Iodoform. (*Journ. de Méd. de Paris*, August 81, 1890.)

788. Wright, Dr. Jonathan.—On Salol in Acute Tonsillitis and Pharyngitis. (*American Journal of Medical Sciences*, August, 1890.)

789. James, Dr. R. B.—On the Value of Atropia in Enuresis. (*Journal of the Amer. Med. Assoc.*, July 26th, 1890.)

790. Gilbert, Dr. V.—On the Treatment of Pulmonary Tuberculosis by Heated Air. (*Rev. Méd. de la Suisse Romande*, July 20, 1890.)

772. *Dujardin-Beaumetz on the Therapeutic Value of Strophanthus.*—Prof. Dujardin-Beaumetz, after a lengthened trial of strophanthus as a heart-tonic, speaks most favourably of it in his lectures on "New Therapeutic Sciences," which are now appearing, under our English translation, in the pages of *The Therapeutic Gazette.* In the July number of this journal, the diuretic drugs are mainly discussed by Professor Dujardin-Beaumetz, but in this connection he necessarily has something to say concerning the cardiac tonics; and in this class he places strophanthus on a level with digitalis. It is pointed out that, whereas the latter agent does not manifest its effects on the organism, that of strophanthus becomes immediately apparent; and it is further declared that the reputed tendency of strophanthus to cause nephritis in those who take it, is not borne out by the experience of those accustomed to prescribe it. Prof. Dujardin-Beaumetz, however, very properly points out that it is necessary for some part of the kidney to be in a healthy state in order that any diuretic at all may act.

773. *Haines on Cascara in Tertiary Syphilis.*—A certain proportion of the subjects of tertiary syphilis are unfortunately persons of so poor a physique that it is not possible to treat them on the lines generally adopted for cure, because of their inability to withstand the depressing influences of such treatment. The frequency, indeed, with which specific medication has to be arrested among patients whom it is obviously relieving of their symptoms, but who are losing strength under the depression it induces, is very considerable, and, probably, not a few unsuccessful results have to be attributed to this cause. It is gratifying, therefore, to learn that in cascara amarga, Dr. Haines of Auckland, New Zealand, appears to have found a remedy which may be taken with impunity by the most cachectic patient, and which is a specific for the improvement and cure of the lesions of tertiary syphilis; and in an article contributed to the *Therapeutic Gazette*, for July, 1890, Dr. Haines instances one very striking case in which he employed the drug in question with most brilliant success, and this good result he has since followed by a number of others equally satisfactory in character. The agent in question seems not to have any power over the primary or secondary syphilitic affection.

774. *Marano on Electricity in Joint Diseases.*—The treatment of painful joint-affections, whether of rheumatic origin or arising from injury, or disease, is oftentimes one of the most perplexing duties that the practitioner of medicine has to encounter, his endeavours to relieve pain being not rarely productive of scarcely any amelioration of his patient's condition. Commenting on this fact, Dr. Marano, of Sydney, describes a method of treating such cases, from which he has secured the most gratifying results, his plan being to pass a current of electricity through the affected part with the aid of sponge-electrodes. The application is made two or three times a day, or oftener, for a few minutes at a time, galvanism and faradism being employed, separately or in succession, as may seem to be desirable. The cases quoted in illustration of the good results obtained are four in number. The first, that of a lady, aged twenty-eight, whose left hip became painful, hot, and swollen, following exposure to cold and wet. The symptoms were not controlled by rest, &c., and the pain was so acute as to defy even subcutaneous morphia injections. The application of the faradic current, however, gave almost immediate relief to pain, and quickly promoted absorption of the effused products, the motion and utility of the joint being speedily restored. The second case, one of injury to the knee, with synovitis and slipping of the semilunar cartilage in a young man, aged eighteen, and had been unavailingly treated by revulsives, strapping, bandages, &c.; the joint was completely cured by galvanism and faradism, continued daily for three weeks. The third case was one of hip-joint disease in a girl of seventeen, in which, after treatment, with good result, by rest and Threnois' splint, there still remained much enlargement of the articulation and contracture of the adductors. Here the faradic current, twice a day for ten or fifteen months, soon restored the natural movements, and led to absorption of the effused material. The last case mentioned was one of effusion into the fascia lata of the thigh, following a fall on the hip while skating, in a girl eighteen years old. Movement was very much impeded by pain and stiffness, which a few applications of the galvanic current completely relieved, so that skating became again a possible recreation for the patient. The swelling, however, was not much reduced in size in this instance. Dr. Marano claims especial value for the treatment he advocates in articular rheumatism. Whether affecting one or many joints, pain he asserts to be invariably relieved by it; and improved usefulness to be an almost certain effect of its employment. C. H. WADE.

775. *Babtschinsky on the Treatment of Diphtheria by the Inoculation of Erysipelas.*—Dr. Babtschinsky observed three severe cases of diphtheria which had a favourable termination after the spontaneous appearance of erysipelas, and this induced him to inoculate other diphtheria patients with erysipelas microbes which had been cultivated on agar-agar. In the course of the year 1888, fourteen patients were thus treated by him. The inoculations, which were done by means of scarifications as for vaccination, were in the neighbourhood of the submaxillary lymphatic glands, and erysipelas showed itself in from four to twelve hours. As the erysipelatous process went on, the membrane gradually disappeared from the fauces, the lymphatic swelling diminished, and the temperature fell. In short the general condition improved, and the patients recovered. In two cases only was he unsuccessful, the patients dying before erysipelas had time to develop. No other treatment of any kind was made use of in the case of those inoculated; and the other cases, which occurred in the same families and were not thus treated, terminated fatally without exception.

776. *Teissier on the Treatment of Typhoid Fever.*—At the recent meeting of the French Association for the Advancement of Science, held at Limoges, Teissier read a paper on this subject, based on fifteen consecutive cases. All of these recovered with the exception of one patient, who in the absence of the writer had received various other treatments, and whose case was complicated by influenza (at that time epidemic), with hyperpyrexia and suppurative nephritis. The treatment recommended is as follows:—(1) Morning and evening a wafer containing 40 centigrammes (6 grains) of naphtol (*a*) with salicylate of bismuth. (2) Four enemata of cold water daily, in order to keep up diuresis. (3) Once daily an enema containing a drachm of extract of cinchona, with 10 to 15 grains of quinine dissolved in infusion of valerian, as a tonic antipyretic. (4) Diet composed of milk, soup, and Bordeaux wine. Under this treatment, no matter at what period of the fever, the writer found that, as soon

as antisepsis was established, and the urine had become of a well-marked green colour (usually after four days of treatment), the temperature fell progressively, albuminuria disappeared, the spleen diminished in size, and the tongue became clean and moist. This fall of temperature was followed by a period of six or eight days, during which it oscillated in a remarkable manner, and at the end of which the patient became convalescent. It was, however. sometimes necessary to increase the dose of naphtol (*a*) by giving a third wafer at midday.

Teissier believes that these satisfactory results are due to the *sterilization of the intestine* produced by the naphtol, and that the other drugs employed are merely auxiliaries, and he thinks it probable that the naphtol also acts by neutralizing the toxic substances produced in the intestine by the bacillus of Eberth.

W. A. FitzGerald, M.D.

777. *Dessan on Antipyrin in Diseases of Children.*—Dr. Dessan, in an interesting article on the therapeutic value of antipyrin in some diseases of children, observes that the only disease affecting children in which the author has employed this drug as an antipyretic is pneumonia (either the croupous or the catarrhal form), and here he seldom resorts to it unless the temperature runs above 104° F. near the onset of the attack, inducing symptoms of nervous irritation, indicating a tendency to convulsive seizures. Its chief value in pneumonia is not so much as an antipyretic, but as a nerve sedative. It should be given in doses of two and a half grains every hour, for four doses, if possible towards evening, so as to secure sleep. The most marked success with antipyrin has been in the treatment of chorea. It should be given in doses of five to seven and a half grains, four times daily, and in some cases a marked improvement is noticed in a week. The close relationship between articular rheumatism and chorea helps to explain its rapid action in chorea. As a remedy for pertussis, the author states that for the last two years he has used nothing else. The dose required is from three to seven and a half grains, three times a day, according to age. In chronic cases of urticaria it is most valuable, and can be given in a little compound syrup of sarsaparilla. The author concludes by stating that he considers antipyrin is the most useful remedy, with the broadest field for action, that has come to our notice since the introduction of chloral and carbolic acid.

Richard Neale, M.D.

778. *Waugh on Orexin.*—This is a new drug, which is supposed to possess the specific effect of increasing the appetite, "regardless of the pathological condition underlying the anorexia." The writer has tried the drug in small doses in a certain number of cases. The results appear to be negative for the greater part. In the case of a lady, the subject of pulmonary fibrosis, the drug was administered for three days. During that period her appetite was reported as ravenous, but her head ached constantly and severely. Without coming to any definite conclusions as to the value of this new agent, Dr. Waugh considers further enquiry desirable.

David Walsh.

779. *Du Castel on the Treatment of Orchitis by the Application of Methyl Chloride.*—The internal administration of salicylate of soda or of tincture of pulsatilla soon, according to M. du Castel, relieves pain in orchitis, and promotes more active resorption of the inflammatory exudation. The first-named drug seems the most efficacious, and antipyrin has no marked effect. The waterproof suspender packed with cotton wool usually enables the patient to get about; but with this method of treatment absorption of the inflammatory products takes place but slowly. Refrigeration greatly hastens the cessation of pain and the resolution of the inflammatory hardness; but the application of cold by means of ice-bags is inconvenient, and is much more easily and effectively carried out by means of methyl chloride. The method employed by M. du Castel is that of *stypage*. A tampon of cotton wool made cold by projecting on to it a jet of methyl chloride, according to the method of Dr. Bailly, is applied for some seconds to the scrotum on the affected side; as a result of this, the dartos contracts energetically, and the skin turns cold and pale. The application must not be continued too long, or erythema, vesication, or even sphacelus may follow. In ordinary cases the application is to be repeated every morning, but in severe cases morning and evening. An experienced hand, M. du Castel remarks, may, instead of *stypage*, employ the direct projection on to the part of a jet of methyl chloride, according to the plan of Prof. Debove, but this requires great delicacy in the manipulation. Immediate and marked relief to pain usually follows the first *stypage*, and patients often ask for a second application. No other treatment, either external or internal, is necessary. The total duration of treatment is, on an average, a week, and the stay in hospital eleven or twelve days, which, the author says, is infinitely shorter than under the old methods.

Arthur Cooper, F.R.C.S.

780. *Quinquaud on Consecutive Eruptions caused by the Ingestion of Uric Acid.*—At the meeting of the French Society of Dermatology and Syphilis, M. Quinquaud stated that he had found that elementary lesions of the skin, both in man and animals, are caused by the ingestion of uric acid. Artificial lesions may be thus excited, but not recognised skin diseases. Experiments were made by the author upon patients, some of whom had a cutaneous eruption. After a dose of 0·15 gr. to 0·20 gr of uric acid had been taken for a fortnight, various lesions were observed. They were of the size of a small pea, had an indurated base, and were in shape often conical. A little pus exuded on pressure. The lesions appear successively, and begin to disappear in from fifteen to twenty days. Erythematous spots are at the same time apparent. They are few, irregularly distributed, somewhat pruriginous, and are found on the upper limbs, abdomen, and lower limbs. Eruptions similar to a generalized eczema or extensive lichen are never seen. Doses of 0·35 gr. uric acid, taken three times in twenty-four hours by eczematous patients, result in the increase of pruritus.

781. *Prévot and Binet on the Effect of Iodine and the Iodides on the Blood-pressure.*—The conclusions arrived at after a long series of experimental observations are:—(1) That iodised water and solution of iodine in iodides do not affect the blood-pressure when injected into the veins. (2) Solutions of iodide of potassium, introduced in the same manner, act like potassium and increase it. In larger doses they provoke a fall in blood-pressure. Iodide of sodium proved less dangerous in this respect, and in large doses produces a temporary increase of pressure, followed by a period of gradual diminution. The authors add that it remains to be seen whether, in diseased conditions and when there is high blood-pressure, the effects would not be more marked. Moreover, the effects of the iodides

in the treatment of arterio-sclerosis may possibly be explained by their beneficial influence on general nutrition.

782. *Rose on the Treatment of Erysipelas of the Body and Extremities by Continuous Tepid Baths.*—Dr. Rose, of New York, recommends the continuous bath (90 to 95 Fahrenheit) in the treatment of erysipelas, the result of which, in several cases, has been excellent. The author believes that the soaking of the tissues with hot water causes the lymph channels of the skin to close. The source of infection is cut off, and the streptococci of Feheelsen can no longer enter. Dr. Rose is also of opinion that the conditions of life of the cocci become greatly impaired by these baths.

783. *Lassar on Aristol in the Treatment of Psoriasis.*—Dr. Lassar, at the meeting of the Berlin Medical Association, March 12, showed a patient in whom aristol was successfully used in psoriasis. The effect of the remedy, as Eichhoff has shown, on the rash of psoriasis, is the same as that produced by pyrogallic acid and chrysarobin, without causing signs of irritation.

784. *Fox on the Apparent Cure of a Case of Leprosy.*—At a meeting of the New York Medical Society, Dr. Fox reported the case of a man who had suffered from typical leprosy. Sensibility of the fingers (as it appears) was completely restored by the systematic administration of chaulmoogra oil. In the year 1884 all the leprous spots on the skin had disappeared. Since that time the patient, who formerly exhibited the most typical symptoms of the disease, independently of the insensibility of the fingers previously mentioned, has perfectly recovered

785. *Kollath on a Case of Lupas Facialis cured by Intercurrent Erysipelas.*—Dr. Kollath, of Hamburg, presented at the meeting of the Medical Society of Hamburg a child suffering from lupus of the face, who was cured by intercurrent erysipelas. Lupus first appeared in the face a year ago. In a short time the two lower eyelids and the nose were perfectly destroyed. The mouth, through the formation of cicatrices, is transformed into a mikrostoma two centimetres wide. Notwithstanding various methods of treatment, the disease continued to progress until October 23rd, when erysipelas of the face set in. Eight days after the disappearance of the erysipelas a striking change became visible in the lupus. The ulcerated parts have become fresh granulating surfaces. There is no sign of lupus nodules. The skin, which was rigid, is now elastic and soft.

786. *Neisser on Aristol.*—Neisser states that the use of aristol in ulcera mollia gave a negative result. No effect whatever was produced upon the gonococcus, either by injections of a watery suspension or by an oily mixture. In a case of chronic, somewhat infiltrated eczema there was no result. The ulcerations of lupus, produced either by scraping or caustics, healed quickly and smoothly. The remedy, however, did not produce the slightest effect upon lupus nodules and parts affected with lupus. Other ulcers, tertiary syphilides, ulcerous scrofuloderma, abscesses of the glands, buboes which had been opened, healed very well. In lichen ruber planus there was no result. Two cases of psoriasis out of twelve patients were cured by aristol. The remainder were very quickly improved by the use of chrysarobin. A case of parasitic eczema (eczema seborrhœicum) did not yield to 20 per cent. aristol.

787. *Yvon on Antiseptol (Iodosulphate of Cinchonine as a substitute for Iodoform.*—The addition of iodine, dissolved in a solution of iodide of potassium, to an aqueous solution of a salt of an alkaloid, causes a bulky precipitate which is a combination of iodine with the alkaloid in question. It has been shown by Herapath that these combinations contain sulphuric acid, and they are in consequence known by the name of iodosulphates. They all contain a large proportion of iodine, but the iodosulphate of cinchonine is particularly adapted for general use, owing to the moderate price of that alkaloid. It is a light, impalpable powder, of a brownish colour, devoid of odour, insoluble in water, but soluble in alcohol and chloroform. It is a perfectly definite combination, containing fifty per cent. of iodine. Its therapeutic properties are identical with those of iodoform, and it can easily be prepared by any chemist.

788. *Wright on Salol in Acute Tonsillitis and Pharyngitis.*—Dr. Wright acknowledges that he felt a good deal of scepticism on reading Gougenheim's enthusiastic description of the treatment of acute inflammation of the pharynx by internal administration of salol, but decided to give it a trial. He tried it in fifty cases, giving from sixty to ninety grains daily. He found the most marked effect in lacunar tonsillitis, less in catarrhal pharyngitis, and least in well-developed quinsy. He presents his results in three tables, viz., those in whom treatment was begun on or before the second day; those in whom it was begun on the third day; and, lastly, those in whom it was begun on the fourth day or later. The number of hours after beginning treatment, in which relief from pain was obtained, is given in each case. The relief from pain coincided in nearly all cases with the relief of the constitutional symptoms; but, strange to say, and the same remark had been made by Gougenheim, the subsidence of the pain was often complete before the swelling or congestion had appreciably diminished. In lacunar tonsillitis the disappearance of the little plugs from the lacunæ was usually synchronous with the abolition of pain. In studying the tables, it will be noted that those cases, twenty-one in all, where treatment was begun in the first 48 hours, obtained relief, on the average, in 17 hours, the shortest being 4 hours, and the longest 36 hours, while two received no benefit. The second class of cases, fourteen in number, in whom treatment was begun on the third day, received benefit, if any, in 27 hours on the average. The shortest time was 12 hours, and the longest 48 hours, in receiving benefit. The third division, fifteen in all, in whom treatment was begun after the third day, obtained relief in 24 hours on the average. Those beginning treatment after the third day obtained relief more quickly, on the average, than those in the second division, because, no doubt, many were improving when the treatment was begun. We know that the pain in any form of simple acute tonsillitis, or pharyngitis, is apt to disappear after the third day under any plan of treatment. Indeed, the second and third divisions are of value principally as a means of comparison with the first, to which most value is to be attached. Dr. Wright concludes his article by quoting Gougenheim's summary, with which he fully agrees: (1) Salol acts beneficially in acute anginas, of whatever cause. (2) It quiets the pain and dysphagia with the greatest rapidity. (3) In quieting the pain, it may shorten the duration of quinsy. (4) It lowers the temperature. (5) In nearly all cases it diminishes the duration of the

angina. (6) In order to attain these results, the dose should not be less than sixty grains daily.

789. *James on the Value of Atropia in Enuresis.*—While resident physician in an orphan asylum in New York, Dr. James had under his charge many cases of enuresis that resisted belladonna, strychnine, and other lauded remedies. After reading a paper by Dr. Baruch in which he recommended atropia in this affection, he determined to give it a trial. Fifteen of the worst cases among the smaller children, from three to nine years old, were selected. A dose of the drug was given at 6 p.m., the hour at which the children were put to bed, and this was repeated at 9 p.m. He commenced with a dose of 1-100 gr., and this was increased by 1-100 gr. every night till the controlling dose was reached. This was in no case less than 4-100 gr. at night, *i.e.* 2-100 gr. at 6 p.m., and 2-100 gr. at 9 p.m. Some required 8-100 gr., divided as above, and one child was given 1-10 gr. each night without showing any symptoms of poisoning. Nothing short of the quantity that produced the full physiological effects was sufficient to control the symptoms. Every case was completely controlled so long as treatment was kept up, except in one instance, where it lost its effect after some months of complete relief. Of the cases completely relieved, the enuresis returned in all, after the drug was left off, in periods ranging from one to six weeks. Attempts were made to taper off the dose, but without much effect. Sooner or later relapse would occur. After eight months of treatment of the fifteen cases, two cases were cured, and these mild cases; two others were benefited, in that they did not wet their bed so often; one it ceased to benefit, while ten showed little or no improvement when the drug was stopped. Since the long-continued use of atropia has no ill effect, and since undoubtedly the vast majority of these cases can be controlled by the drug, the author holds that we can claim for these children and their mothers a valuable friend in atropia. We can administer a full dose of atropia every night until the child has out-grown his infirmity, and this point can be tested by discontinuing the drug from time to time. It will not be found necessary to increase upon the original controlling dose. As to the children over twelve years of age, on whom the author tried this treatment, he can only say that they did badly. He cannot recall a case in which there was the least benefit, and he believes that children over this age who suffer from enuresis are subjects of such inherent defects that other drugs, or means, than atropia must be sought ere they are relieved.

790. *Gilbert on the Treatment of Pulmonary Tuberculosis by Heated Air.*—Dr. L. Weigert, of Berlin, first proposed inhalations of air heated to 180° to 200° C. for the treatment of pulmonary tuberculosis. Starting from the principle that it was necessary to attack the bacillus of Koch, and that this bacillus, as many experiments prove, could not withstand high temperatures, Weigert thought that, by raising the temperature of the air in the lungs to a sufficient point, we might act directly on the bacilli and destroy them. With this view he devised an apparatus which enabled the patient to inhale dry air heated to 180°, or even 200° C. This method has now been tried by various observers in Europe and America, and the results which are being published, from time to time, are mostly of a favourable character. Among those who have published encouraging results are Kohlschütter of Halle, Hertoghe of Antwerp, Filleau of Paris, and Vermeulun of Amsterdam. On the other hand, Dujardin-Beaumetz has recently raised his voice against the hot-air treatment, and Mosso, Kokowroff, and Trudeau have reported unfavourably of it. Dr. Gilbert has during the past year studied the effect of the hot-air treatment, and in this paper gives an account of his results. In the first place he endeavoured to establish what modification in the temperature of the body was brought about by the inhalation of hot air. It was found, by taking the temperature in the rectum and axilla, that the inhalation of hot air produced an elevation of from 0·3 to 1·1° C. The next question was to what extent the air in the lungs was heated by the inhalation. Weigert found the expired air 45° C., and Kohlschütter 60° C. These authors concluded that the temperature of the air in the lungs was above this point. Gilbert found by careful observations, with certain modifications of the apparatus, that the air as it left the mouth was 44° to 46° C. He questions, however, whether this air was really that which was expired from the lungs. Physiology teaches us that the respiratory changes take place slowly layer by layer. A single inspiratory current does not suffice to reach the finer ramifications of the bronchial tubes. The rise of temperature could not, therefore, take place in the air in the lungs except in a progressive manner by the successive contact of the upper layers of air in motion with the lower residual layer of air. The expired air may, therefore, have a temperature of 45° C. without the air in the lungs having undergone any such elevation. The temperature taken directly in the lungs by means of thermo-electric apparatus would indeed remove all doubt on this point, but such experiments have not as yet been made on the human subject. Gilbert made some observations on two cases of empyema, which throw much light on this point. He introduced a thermometer into the pleural cavity during the inhalation of hot air, and found that the temperature only rose 1° C., while that of the axilla had in the meanwhile risen 0·6° C. He concludes that the rise of temperature in the pulmonary parenchyma is much less than some have imagined. He doubts, therefore, any direct effect of the hot air on the bacilli. Nevertheless, he has had good results from the treatment, and suggests that the dryness of the respiratory tract, produced by the prolonged inhalation of hot air, may, by modifying the surroundings in which the bacilli exist, lead indirectly to their destruction. He treated, in all, thirty patients by this method. Four of these were asthmatic, and the remainder were subjects of tuberculosis in different stages. The asthmatic cases derived marked benefit, which is not any more easy to explain than is the benefit derived by tubercular patients. Of the tubercular cases, four had already large cavities in the lungs. These cases were not benefited, and Dr. Gilbert holds that such cases are not suitable for the treatment. Three cases were in the early stages, and these derived most benefit. In general, the advantages derived from the hot-air inhalations were as follows:—During the first day the cough and expectoration increase, but after twelve or fifteen sittings, they undergo marked diminution. The appetite returns, the weight increases, and the night-sweats diminish and disappear. Hæmoptysis was never caused by the treatment, even in those predisposed thereto. In four cases the bacilli disappeared entirely from the expectoration, and in three cases notable improvement occurred in the auscultatory signs. In other cases, bacilli continued to appear in greater or less numbers in the expectoration, and the pulmonary lesions appeared to be stationary, in spite of the improvement in the

general state and in the subjective symptoms. Lest it should be objected that the beneficial results were attributable to the stay in hospital, Gilbert states that some of the best results were obtained in out-patients.

Gynæcology and Obstetrics.

RECENT PAPERS.

791. Davis, Dr., E. F.—On Pressure Œdema in Pregnancy. (*Philadalphia Med. and Surg. Reporter*, August 2, 1890.)

792. Madden, Dr. More.—On Ovarian Herniæ; their Causes, Symptoms, and Treatment. (*British Med. Assoc.*, July, 1890.)

793. Madden, Dr. T. More.—On the Treatment of Cystitis in Women. (*Berlin Medical Congress*, August, 1890.)

794. Schoolfield, Dr. C. B.—On a Case of Tubal Pregnancy Successfully Treated by Laparotomy after Rupture. (*Cincinnati Lancet-Clinic*, July 26, 1890.)

Art. 791. *Davis on Pressure Œdema in Pregnancy.*—Some interesting symptoms were pointed out by Pf. Davis in the course of his clinical lecture. The patient was a healthy and well-developed woman, at about full term. When on her feet there is swelling of the legs, more marked in one than the other. In November, 1889 (which must have been shortly after conception), her right foot began to swell, and this continued, without other trouble until two weeks ago, when the left foot began to swell. At the same time the general circulation became disturbed, as shown by the palpitation, and a soft systolic aortic murmur. The position of the uterus during the last weeks of pregnancy is usually that of left lateral obliquity. This fact gives the key to the œdema. Her right leg, which was intensely swollen, has almost entirely recovered under rest. The dropsy was therefore a transient condition, due to some mechanical obstruction, and not to organic disease. In the present case the fundus is slightly above the umbilicus. The back of the child is to the right, the smaller fœtal parts to the left. The increase in the size of the liver in the last part of the pregnancy is a distinct factor in influencing the fœtus to take its position on the left side of the abdomen, and also in determining the obliquity of the uterus. It takes up some of the room which the uterus tries to fill, and thus favours the turning the fœtus into the left occipito-anterior position. In this case, however, matters are reversed, the liver is enlarged, and the child is to the right. The uterus always inclines to one side or the other, and here we have an excessive right lateral obliquity of that organ, probably due to the roominess of the pelvis. As a result of this change, there is an increased pressure on the venous trunks of that side which can be avoided by maintaining the recumbent position As to the heart, there is not much import in the systolic murmur. The kidneys are doing their work. Continued rest and attention to the bowels are all that is indicated in the way of treatment. When labour comes on, we may have some very interesting complications. If the membranes should rupture while the patient is in a standing or semi-recumbent position, the rapid escape of amniotic fluid may lead to a lateral presentation. Or, again, we may have a precipitate labour, or a face presentation. Occasionally in a breech presentation, in such a case as this, we might have the complication of the arms extended along the head, or the occurrence of the extension of the head at delivery.

792. *Madden on Ovarian Herniæ; their Causes, Symptoms, and Treatment.*—Dr. More Madden observed that ovarian herniæ were among the most neglected, although clinically they should be included amongst the most important, of the troubles that occur in gynæcological practice. In the great majority of cases they occur downwards into Douglas' space, and in such instances the left ovary is that most frequently displaced. The next in point of frequency of these herniæ are those occurring in the inguinal regions, where they are either found above Poupart's ligament or, as is more commonly the case, follow the course of the canal of Nuck downwards and forwards, and so present in the labia where they may be readily recognized. In the former or directly downward variety of displacement, the ovary may be discovered on vaginal examination in the recto-vaginal fossa as a small, oval-shaped, firm, elastic and highly sensitive tumour, bulging forward into the post-cervical *cul de sac.* In the larger number of cases ovarian herniæ, especially those in Douglas' space, result from the *vis à tergo* of abdominal or uterine tumours, or from the tension on the appendages occasioned by displacements of the uterus. Diagnosis.—Until recently these herniæ when inguinal were very generally confounded with enlarged glands; when labial, with other tumours in that situation; and when downwards, with pelvic abscess, and hamatocele. Or, as often happens, they are mistaken for the retroflexed fundus uteri, and the patient suffering from an ovarian prolapse is vainly treated for a non-existent retroflexion or retroversion of the uterus. He claims that there can now be no excuse for such errors. The sudden occurrence of the tumour, its physical character, the peculiar dull sickening pain, and the extreme tenderness and nausea manifest on examination, are sufficient to enable a correct diagnosis to be made by any competent gynæcologist. Treatment.—Where the ovarian hernia takes place through either of the abdominal rings or downwards into Douglas' space, it may in some instances be reduced, as any other hernia similarly situated. In the majority of cases, however, such herniæ are irreducible when discovered, and must either be supported in the former case by applying a hollow truss, whilst in the latter case the prolapsed ovary must be replaced if possible, and kept in position with a peculiar form of pessary (exhibited), specially devised by Dr. More Madden for the purpose, or failing this, if the symptoms be urgent, the ovary must in some cases be removed. The foregoing views are illustrated in the paper of which this is an extract by the details of several instances of ovarian herniæ, exemplifying the clinical history and treatment of such cases.

793. *Madden on the Treatment of Cystitis in Women.*—Dr. Madden commenced by saying that, of all the diseases met with in gynæcological practice, there is none more frequently met with, more distressing in its effects, or more intractable to the means generally relied on for its relief, than cystitis in women. He therefore brought under the notice of the International Medical Congress a method of treatment which he had found, by clinical experience, to be generally successful in the rapid curative treatment of this condition. The measures most commonly employed in such cases are merely palliative, and may relieve, but *per se* can never

cure, well-established cystitis in women. Nor indeed is there any method by which that can be accomplished save by giving the bladder absolute physiological rest. For this purpose Dr. Emmet's operation, *i.e.*, the establishment of an artifical vesico-vaginal fistula, may be successfully employed in some instances; but the practical objections to it are so great and obvious that for several years past he has abandoned this procedure in favour of another which he has found more generally effectual, and quite free from the disadvantages of the operation referred to. The plan which he now employs, in a very large number of cases of cystitis in the gynæcological wards of the Mater Misericordiæ Hospital, Dublin, consists firstly in the full dilitation of the urethral canal with the instrument exhibited, so as to paralyze the contractility of the sphincter vesicæ and canal, and thus produce a temporary incontinence of urine; and secondly, in the direct application through the same instrument of glycerine of carbolic acid to the diseased endo-vesical mucous membrane. He added that any pain thus caused may be prevented by the previous topical application of a solution of cocaine, and that the procedure recommended seldom requires to be repeated more than once or twice at intervals of a week or ten days, and, combined with the internal use of boric acid, rarely fails to effect a rapid cure in any ordinary case of female cystitis.

794. *Schoolfield on a Case of Tubal Pregnancy Successfully Treated by Laparotomy after Rupture.*—The patient was a married woman, twenty-seven years of age, with a history of miscarriage five years previously, and probably again in July, 1889. In October, 1889, she became pregnant once more, and in December, while in the water-closet, she was seized with excruciating pain in the lower part of the abdomen, vagina, and rectum, followed by syncope. When seen the patient was collapsed, pulse 140, feeble, pain intolerable. Morphia was given and the pains ceased. There was considerable discharge of blood per vaginam, and Dr. Schoolfield expected an abortion, though the os uteri was not patulous. These symptoms continued until December 25, fifteen days after the first attack. On this day the patient was walking down stairs, and was seized with symptoms in every particular corresponding to those characterizing the former attack. The morphia treatment was repeated, and was followed by good reaction. Digital examination disclosed a lump as large as an orange, to the left of, and behind, the uterus. Fluctuation in this mass was not very distinct, and he diagnosed tubal pregnancy. A consultation was held, and it was agreed that the symptoms pointed to hæmatocele, probably extra-peritoneal. It was decided to postpone interference, in the absence of urgent symptoms. Under the treatment above detailed, the patient daily improved until January 6, 1890, when she was again seized with symptoms of hæmorrhage, the pain and shock being quite severe. Dr. Palmer, who was called in for advice, concurred in the diagnosis of tubal pregnancy, but thought that the patient's condition precluded the advisability of a laparotomy. He advised the employment of the faradic current. Peritonitis, however, supervening, prevented this being tried. On January 12, the patient not improving, an attempt was made to clear up the diagnosis, and a sound was accordingly passed into the uterus, which measured four and one-half inches in depth. This seemed to justify the belief that the fœtus might be *in utero*, and, if so, that an abortion would speedily occur. It is needless to say it did not occur. The patient's condition did not improve, pulse reaching 110 to 120, and temperature, 100° to 103° F., with considerable abdominal distension, and marked pain, with occasional nausea. Laparotomy was ultimately decided upon, and the operation was performed by Dr. Reamy, on February 9, 1890, under antiseptic precautions. No chemical of any character was employed, however, either in sponges or in the warm water with which the abdominal cavity was washed out. On opening the peritoneal cavity an enormous blood-clot filled the pelvic cavity. It reached a line from the promontory of the sacrum to the uterine fundus, the uterus being anteverted against the pubes. This clot was smooth, and rounded upon its upper surface. The peritonæum, which intervened between it and the abdominal cavity, had evidently been dissected up from the floor of the pelvis. It was so thin and delicate that it yielded, being ruptured by the touch of the fingers of the operator, so that it was opened by tearing rather than by cutting. The clot was very dark and somewhat firm. When the clot was removed the fœtus was found in its centre, or rather more to its lower surface, deep in the pelvis. The fœtus appeared of about ten weeks' gestation. It was flattened and about the colour of the clot containing it. The broad ligament on the left side was seen to be thickened, ruptured, and spread out. A mass, which the operator pronounced placental, was partly imbedded in the broad ligament and partly outside, protuding through the rent in the ligament. The outer portion of the ligament, together with the fimbriated extremity of the Fallopian tube and the ovary, were attached to the pelvic wall. With this mass the intestine was also adherent. On separation of this mass from the pelvic peritoneum, some pus escaped. The tube, ligament, and ovary were tied off near the uterus and removed. All clots that could be cleaned out of the pelvic cavity by the hand were removed. The operator considered that the remnants of the peritoneal cyst left were so frail and scanty that he did not consider them, either in inserting the drainage-tube or in closing the abdominal cavity. The cavity was thoroughly washed out with warm water, which had been filtered and boiled, a glass drainage-tube was inserted and the wound closed by five silk sutures. The shock was considerable, and during the application of bottles of hot water to the extremities and body an accident occurred which caused much annoyance during convalescence. One of the bottles was allowed to get against the right arm, and remain until a severe and somewhat extensive burn occurred. During the first two days much dark fluid escaped from the drainage-tube. Drainage-tube removed on the fifth day. No rise of temperature after the operation. Temperature had been 100° to 102° before. It was fifteen to twenty days before the temperature remained normal during an entire twenty-four hours. At the beginning of the fifth week the patient noticed gas escaping from the drainage-tube sinus, which had not yet closed. March 15th, when the nurse administered an enema of water, it, with a large quantity of fæcal matter, escaped from the abdominal wound. Fæcal matter continued to escape for about twelve days. Then, for about ten days only, gas, after which time nothing further escaped. The patient was eating and sleeping well, rapidly gaining strength, and was in excellent spirits.

PROFESSOR METSCHNIKOFF, of Odessa, has been appointed head of the Pasteur Institute at Paris.

Pathology.

RECENT PAPERS.

795. **Felser, Dr. Josif S.**—On the Morbid Anatomy of the Retina and Optic Nerve in Affections of the Brain and its Membranes. (*St. Petersburg Inaugural Dissertation*, 1889, No. 61, pp. 55.)

796. **Kromayer, Dr.**—On the Pathological Anatomy of Psoriasis.

Art. 795. *Felser on the Morbid Anatomy of the Retina and Optic Nerve in Affections of the Brain and its Membranes.*—Dr. Josif S. Felser, of Kazan, describes the researches which he has made (in Prof. N. P. Ivanovsky's laboratory, in St. Petersburg) with the aim to study the condition of the retina and optic nerve in cases of organic disease of the brain and its membranes. The total number of cases examined, within eighteen hours of the patients' death, amounted to forty-one, of which (*a*) seven referred to purulent basilar meningitis, in five men and two women, aged from twenty-one to thirty-seven; (*b*) four to tubercular meningitis, in one man and three women, aged from twelve to twenty-one; (*c*) twelve to chronic meningitis (pachymeningitis, leptomeningitis simplex, and hæmorrhagic), in eleven men and one woman, aged from thirty-four to fifty-two; (*d*) seven, cerebral hæmorrhage, in six men and one woman, with severe arteriosclerosis, aged from forty-four to sixty-one; (*e*) eleven, cerebral arteriosclerosis (of them, two with softening of the brain), sex and age not given. The following conclusions are arrived at by Dr. Felser:—(1) All organic cerebral affections invariably give rise to these or other morbid alterations in the retina and optic nerve. (2) Acute inflammations of the meninges cause dropsy of the optic nerve, which, in its turn, constitutes one of the chief causes of acute inflammation of the nerve and retina, accompanied by œdema (*neuroretinitis œdematosa*). (3) Chronic inflammations of cerebral membranes induce a diffuse chronic retinitis, spreading always from the vicinity of the optic disc towards the periphery of the retina, and characterised by a slow course. In pachymeningitis there is also observed perineuritis with extravasations into the intravaginal space of the nerve; in hæmorrhagic leptomeningitis, there may occur chronic perineuritis, interstitial optic neuritis, acute inflammation of the retina, with œdema of the papilla and its neighbourhood. (4) Arteriosclerosis of cerebral vessels is apt to spread to those of the optic nerve and retina, and invariably leads to a peripheral œdema of the latter structure. Such retinal œdema should be regarded as a result of chronic venous engorgement, which develops in consequence of a general disturbance of the systemic circulation. (5) In an overwhelming majority of cases, cerebral arteriosclerosis associated with cerebral hæmorrhage is accompanied by similar extravasations into the retina. The cause of the intraretinal hæmorrhage should be sought mainly in the formation of capillary aneurysms on the branches of the central retinal artery. [The author adds, by the way, that intraocular hæmorrhages not unfrequently occurring in old people after extraction of cataracts, or iridectomy, are, as a rule, similarly caused by miliary aneurysms of the retinal artery, which give way under the influence of a rapid fall of the intraocular tension.] Almost invariably there are also found œdema of the retina with diffuse chronic retinitis in the central portions of the latter, and cystic degeneration in the peripheral. (6) Choked disc (*Stauungs-papille* of German authors) develops invariably from the compression of the optic nerve (near its entrance into the posterior scleral orifice) by some morbid fluid accumulating in the intravaginal space.

Valerius Idelson, M.D.

796. *Kromayer on the Pathological Anatomy of Psoriasis.*—The author, after carefully conducted histological examinations of affected skin, considers that the pathology of psoriasis consists in a progressive perversion of the nutrition of the cutis, which cannot be considered inflammatory in the ordinary sense, as there is neither pain, heat, nor general disturbance. The special character of scaliness he believes to be due to the infiltration of the epidermis with leucocytes by which the horny change is prevented. He found no appearance which could justify the assumption of a vegetable parasite on the surface of the skin.

Bacteriology.

RECENT PAPERS.

797. **Eraud, M.**—On the Non-Specific Nature of the Gonococcus. (*Annales de Dermatologie*, No. 5, 1890.)

798. **Tommasoli, Dr.**—On the Bacillus of Sycosis. (*Monats. f. Prakt. Derm.*, 1889, vol. viii., No. 11; *Annales de derm. et de syph.*, 1890, No. 4.)

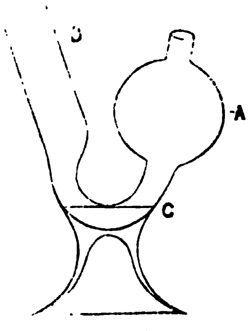
799. **Smith, Dr. T.**—On Employment of the Bulb and Tube Apparatus used for Fermentation of Sugar. (*Centralblt, f. Bakteriologie*, vol. vii., 1890.)

Art. 797. *Eraud on the Non-Specific Nature of Gonococcus.*—The following are M. Eraud's conclusions:—(1) There exists in the urethra of healthy men a staphylococcus which is capable of producing orchitis. (2) This microbe, with the same characters as regards both morphology and reaction, is found always in adolescence, in childhood, and in the new-born babe. (3) This saprophyte microbe presents the same characters as the microbe found in gonorrhœal orchitis, nay, even as the gonococcus itself, which is quite capable of cultivation. (4) There is reason for supposing, if not for coming to the conclusion, that all these microbes are one and the same parasite which exists as a saprophyte in the normal urethra, and which is capable, under the influence of conditions which are at present unknown, of giving rise to gonorrhœa. Arthur Cooper.

798. *Tommasoli on the Bacillus of Sycosis.*—Tommasoli observed at Unna's clinique a patient whose whole beard was invaded by a sycosis provoked by the ordinary pyogenic micro-organism. The skin of the face had a peculiar brownish-red tinge, which contrasted with the pustular eruption. There were no large inflammatory nodules and no large cicatrices. Diseased hairs, placed upon gelatine and afterwards upon *plaques*, gave rise in four days to innumerable uniform colonies. Eight days later these colonies were found to consist exclusively of bacilli. Their form was short, rectilinear, with rounded extremities. In cultivations in broth the bacilli are found in small chains, each one of which is composed of four to eight elements. Upon other nutrient media they developed very slowly at an ordinary temperature. The bacilli are not motile. Spores do not exist. Upon *plaques* the more deeply-situated colonies appear at the end of four days as small white points.

The superficial colonies were united and presented a grey coloration. Eight days afterwards they were little changed. After the lapse of a month, the lower colonies were round like mustard seeds, but the superficial ones were large, brilliant, mucous, and thin. When the colonies were well developed the deepest constituted thick discs of the depth of a pea. They were opaque, with clear, dark contours. The upper ones, on the contrary, were like thin discs, their edges being yellowish-grey and transparent. Upon gelatine cultivations the bacilli grew in the form of a nail. Upon agar-agar they developed very slowly on the surface, and formed isolated mucous patches, of a whitish-grey colour. Later on they became confluent and formed brilliant tracks. The growth of the bacilli upon slices of potatoe is rapid and luxuriant. A strong and disagreeable odour proceeds from them. The author succeeded in inoculating pure cultivations of bacilli, the experiments showing that the cultivated bacillus is pathogenic and causes the same disease of the skin as sycosis. Cultivations made from pus obtained from two vesicles gave rise to pure cultivations of the same bacilli. These bacilli, according to Tommasoli, are somewhat similar to the pyogenic bacillus fœtidus described by Posset. On account of the more yellow colour of cultivations upon potatoes, the author gives to the bacillus the name of *bacillus sykosiferous fœtidus.*

799. *Smith on the Employment of the Bulb and Tube Apparatus used for the Fermentation of Sugar.*—In a search for a simple apparatus for bacteria, Dr. Thomas Smith came across the so-called gährungs-kölbcher, a little bulb and tube apparatus, which has been in use for a long time in physiologico-chemical laboratories, and which is especially valuable in the qualitative and quantitive estimation of sugar in the urine. The trial of the apparatus has been so favourable that it can be recommended as a valuable culture vessel to all bacteriologists. The employment of this simple apparatus has already brought into view another useful property. The little bulb is handled just in the same way as an ordinary test-tube. After the opening has been plugged with a wool plug, it is, in a dry, hot chamber, sterilized, then filled only, *b* and *c*, and standing upright is heated three or four times in currents of steam. After each heating, especially after the first, the air, which has been driven out of the nutrient fluid by means of the heat, and has collected in *b*, is got out by a gentle inclination of the tube. After the last heating, the nutrient fluid in the closed tube *b* is entirely free from oxygen, which may be easily proved by staining the fluid with litmus. During sterilization, the fluid entirely loses its colour. After a few days, the colour returns in the open tube *a*, and later on in *c*; but not in *b*, even after standing for a long time. (1) Aërobic bacteria do not grow in *b*, the fluid in *a* becomes cloudy, but the cloudiness does not spread beyond the connecting tube *c*. Anaërobic bacteria, if motile, grow in *b*; but the cloudiness, for the most part, is somewhat less marked than in the open tube. It is therefore possible, with the help of the apparatus, to distinguish aërobic from anaërobic bacteria, provided they are motile; when they are not motile, they cannot rise in the tube, they grow in masses in the connecting-tube *c*. The motile typhoid, hog cholera, and colon bacteria dim the fluid in *b*. The comma-bacilli (cholera, Deneke, Finkler, and Prior) on the contrary, leave it clear. (2) The most valuable application of the apparatus is for the estimation of the gas formation. The ease with which one can carry out researches upon the relative quantity of gas developed by different bacteria, or by the same bacteria under diverse circumstances, in the composition of the nutrient substance, contrasts favourably with the time the process usually occupies, which indeed has hitherto frightened off investigators by the trouble which such researches entail.



Syphilography.

RECENT PAPERS.

800. Cordier, M.—On a New Variety of Balanitis. (*Lyon Médical and Annales de Derm. et de Syph.*, No. 5, 1890.)

801. Humbert, M.—On Urethro-penile Fistulæ due to Simple Chancre or to Syphilis. (*Ibid.*)

802. Fournier, M.—On a form of Syphilide simulating Lupus Erythematosus. (*Annales de Dermatologie et de Syphilographie*, No. 5, 1890.)

803. Morel-Lavallee, M.—On Difficulties in the Diagnosis of Syphilitic Chancre. (*Ibid.*)

804. Fournier, M.—On Infantile Chancriform Ecthyma. (*Ibid.*)

805. Du Castel, M.—On Atypical Syphilitic Chancres. (*Ibid.*)

806. Quinquaud, M.—On the Treatment of Syphilis by Calomel Plaster. (*Ibid.*)

807. De Beurmann, M.—On Mammary Chancres communicated to Nurses by Infants. (*Ibid.*)

Art. 800. *Cordier on a New Variety of Balanitis.*—The form of balanitis described by M. Cordier is due to the application of calomel (in ointment or powder) to the penis, by persons who are at the same time taking iodide of potassium internally. The inflammation is of a similar kind to that which is sometimes seen in the conjunctiva, when calomel is dusted into the eyes of patients under treatment by iodide of potassium. In balanitis of this kind there is much more pain than in ordinary balanitis, and the secretion is more abundant and more serous in character; the prepuce is always swollen, and when the glans is exposed it is seen to be covered with a pultaceous coating, beneath which in the worst cases there are ulcerations. For the production of the balanitis, it is almost a necessity that the prepuce be long, and the irritation is set up by a few drops of the urine containing the iodide coming in contact with the calomel beneath the prepuce. The change that takes place seems to be the transformation of the protochloride into proto-iodide of mercury.

801. *Humbert on Urethro-penile Fistulæ due to Simple Chancre or to Syphilis.*—Fistulæ of this kind may follow phagedenic or sub-preputial local chancres, or ulcerating syphilomata. Fistulæ of syphilitic origin are the most frequent, and occur generally in the earlier years, or even months, of the disease; sometimes they are caused by the primary sore. There are four principal varieties of these fistulæ: (1) Fistulæ of the balano-preputial furrow, (2) of the fossa navicularis, (3) of the body of the penis, (4) destruction of the whole penile portion of the urethra. The second variety is much the most common. The anterior wall of the fossa navicularis may be simply perforated, or it may have disappeared partly or wholly, or the loss of substance may extend beyond its limits. These fistulæ differ completely from those produced by traumatism, stricture of the urethra, or gonorrhœa. They are nearly always situated near the anterior extremity of the penile urethra; they form from without inwards, and are accompanied by mutilation of the penis, often of considerable extent, which adds to the difficulty of treatment. The surgical treatment comprises not only the occlusion of the fistula, but, as far as may be possible, the correction of deformities of the penis. The classical methods of procedure in the majority of cases require to be modified or associated according to circumstances. A perfect result is rarely obtained, except by several successive operations. Cauterisation is applicable only to very small openings. Urethrorraphy is successful when there is sufficient tissue to allow of the edges being brought together; but often this operation has to be combined with urethroplasty either for the purpose of closing the fistula or to restore the configuration of the penis. When urethrorraphy is impracticable, urethroplasty is the only resource, and the tissue must be taken from the prepuce, the sheath of the penis, or the scrotum, as may seem most desirable. ARTHUR COOPER.

802. *Fournier on a form of Syphilide simulating Lupus Erythematosus.*—In a communication to the *Société Française de Dermatologie et de Syphiligraphie*, M. Fournier describes the case of a woman, aged twenty-six, the subject of inherited syphilis, who presented herself for treatment on account of a lesion of the lower lip, which had all the characters of lupus erythematosus (Cazenave), and which, after careful examination, was considered to be a case of that kind. Just at this time, however, an affection of the eye, manifestly due to inherited syphilis. showed itself, and the diagnosis of the skin disease was thereby rectified. Under specific treatment, both eye and skin were rapidly cured. M. Fournier, in his remarks on this case, states that this is the first time, so far as he knows, that the existence of a syphilide liable to be mistaken for lupus erythematosus has been pointed out. [The fact that syphilis may closely imitate lupus erythematosus, was long ago drawn attention to by Mr. Hutchinson, as well as more recently in his work on syphilis (1887). The reporter also has observed cases of a similar kind. In one of these the bats-wing patches on the cheeks and nose of a man suffering from acquired syphilis, resembled a typical example of lupus erythematosus; they quickly disappeared under antisyphilitic treatment.]

803. *Morel-Lavalée on Difficulties in the Diagnosis of Syphilitic Chancre.*—The case illustrating the difficulty which may arise in the diagnosis of syphilis, was that of a man, aged fifty, in whom the primary sore ran its course to cicatrisation without any induration of its base, and without any adenopathy. The cicatrix became indurated, but there was no return of ulceration. Secondary symptoms followed after the usual interval, but there was no glandular enlargement in any region of the body. The author remarks that, though glandular enlargement is wanting in some cases where the primary sore becomes gangrenous, its absence is, nevertheless, a very rare occurrence. Induration, again, is sometimes absent, especially in women; but it is exceptional for both these important signs to be wanting in the same case. The author also calls attention to the peculiarity of the induration only developing in the cicatrix after the sore had healed. This he calls evolution of the chancre "in two periods."

804. *Fournier on Infantile Chancriform Ecthyma.*—A child, twenty months old, was brought to M. Fournier on account of two lesions which had appeared a few days previously. The lesions in question were situated on the right buttock, near the perinæum, and bore a very striking resemblance to syphilitic chancres; they were round, about one centimètre in diameter, and resembled syphilitic sores in colour. The margins were raised, the floor was smooth, and the discharge was scanty and serous in character; there was also a certain amount of resistance about the base, resembling what is known as parchment induration. There was, however, no glandular enlargement in the groin, and the child had also on the lower limbs an eruption of scattered pustules which developed, whilst under observation, into ordinary ecthyma. The child's mother said the lesions on the buttock had begun in the same way, and the result proved that they also were really ecthymatous lesions which had assumed the aspect of syphilitic primary sores.

805. *Du Castel on Atypical Syphilitic Chancres.*—M. du Castel recently observed two patients, one of whom had thirteen, and the other seven syphilitic primary sores. The sores had not all appeared on the same day, but successively in the course of several days. They were excessively sensitive, and induration was ill-marked; they showed a tendency to increase in depth, and the glands were but slightly affected. The appearance of roseola confirmed the syphilitic nature of the sores in both cases. The failure of inoculation in one of the cases showed that the virus of the local or soft chancre had nothing to do with producing the multiplicity of sores.

806. *Quinquaud on the Treatment of Syphilis by Calomel Plaster.*—M. Quinquaud, having found that most of the ordinary methods of administering mercury are attended by serious inconvenience in a certain number of cases, has made experiments of various kinds, and now recommends, as being both convenient and efficacious, the application of a plaster containing calomel, which is to be placed over the region of the spleen. The formula of the plaster is as follows:—Diachylon plaster, 3,000 grammes; sublimed calomel, 1,000 grammes; castor oil, 300 grammes. Before applying the plaster, the skin is cleansed with soap, and then a piece of the plaster, one decimètre square, is applied and kept on for eight days, after which an interval of eight days is allowed, and then the plaster is applied for another eight days, and so on. In the case of patients who are engaged in manual labour, the plaster is to be renewed after four or five days. M. Quinquaud has assured himself, by examination of the urine, that the mercury is really absorbed when administered in this way, and states that he has

obtained as good results from this as from other mercurial preparations, whether given by the stomach or by subcutaneous injection. Syphilides of various forms have been observed to disappear in from eight to fifteen days after the application of the plaster. By applying the plaster at intervals as above recommended, salivation, even of the mildest kind, will be avoided, but, if mild salivation be desired, a double quantity of the plaster may be used, but with this, even when it is allowed to remain *in situ*, there will never be more than a slight stomatitis. The author considers his mode of treatment one that may be safely recommended, and he states that under its use an infinitesimal quantity of mercury keeps passing constantly into the circulation, and that the body is thus kept continually under the influence of the same dose of the medicament.

807. *De Beurmann on Mammary Chancres communicated to Nurses by Infants.*—M. de Beurmann showed to the *Société française de Dermatologie et de Syphilographie*, three women infected with syphilis by suckling diseased children, the primary sores having been seated on the breast in all cases. The author drew attention to the multiplicity of the lesions in such cases, due, no doubt, to the frequency of excoriations in this region, and to the prolonged contact which takes place in the act of suckling. The most noteworthy points in connection with these cases were that all three women contracted their syphilis at the *Hospice des Enfants-Assistés*, where they were employed as nurses, and that it was by no means certain that they had not further spread the disease by suckling other children before their own contagion was recognised. These circumstances are, as M. de Beurmann justly remarks, deplorable, and show that something is wrong in the system of suckling pursued at the institution in question, and it is satisfactory to learn that a committee, consisting of MM. Rollet, Fournier, Mauriac, Sevestre, de Beurmann, and Feulard, was at once appointed to enquire into the matter.

Dermatology.

RECENT PAPER.

808. WEIS, DR.—On Epidemic Zoster. (*Archiv. f. Derm. u. Syph.*, 1890, Hfts. 4 & 5.)

ART. 808. *Weis on Epidemic Zoster.*—Kaposi has described an epidemic which occured in Vienna in the year 1888. The author has now described cases which occured in Professor Pick's clinique at Prague which point to a similar epidemic. Within two months fifteen cases of zoster were treated, a most exceptional number within the time. The author carefully examined these cases in connection with nerve and vascular distribution and found the nerve theory borne out by them. In three cases there were painful points discovered in the nerves. He finally comes to the conclusion that it is now sufficiently shown that herpes may be regarded as an infectious disease favoured probably by climatic conditions, and that it appears at certain times in small epidemics.

Laryngology and Otology.

RECENT PAPERS.

809. RICHARDSON, DR. C. W.—On a Case Pharyngeal Aneurism (*Journal of the Amer. Med. Assoc.*, August, 1890.)

810. INGALLS, DR. FLETCHER.—On Hysterical Aphonia. (*Journal of the Amer. Med. Assoc.*, July 19, 1890.)

811. DOWNIE, DR. WALKER.—On Unusually Large Nasal Polypi, with Remarks on the Methods employed in their Removal. (*Glasgow Med. Journal*, August, 1890.)

ART 809. *Richardson on a Pharyngeal Aneurism.*—A female, aged thirty-five, consulted Dr. Richardson for a feeling of dryness in the pharynx, and a stuffy sensation in the nasal cavities. On examination, the wall of the pharynx presented an atrophic appearance. To the right of the median line was seen a prominent bulging mass, which extended from a little to the right of the median line to the right lateral pharyngeal wall, and from the level of the base of the tongue to a line corresponding to the lower border of the soft palate. Its length was about two, its breadth about one and a half centimetres, while it protruded into the pharyngeal cavity about four millimetres at the point of greatest protusion. The mucous membrane covering, and that adjacent to, the tumour did not differ in any respect from the mucous covering of the remaining portion of the pharyngeal cavity. A point noted almost simultaneous with the discovery of the tumour was that it pulsated, and that this pulsation was synchronous with the action of the heart. A very distinct and high pitch bruit was heard upon application of stethoscope to right side of neck. Pressure upon common carotid in the neck caused the tumour to diminish in size, with complete cessation of pulsations. The blood seemed, just beneath the mucous surface, as though at each pulsation of the heart the swelling must rupture. Patient noted pulsation, and stated that the "thumping" was very annoying to her. Dr. Richardson remarks that the existence of an aneurismal dilatation of a pharyngeal artery is unusual. He thought at first that it was connected with the internal carotid, the artery having an anomalous distribution. It could also be one of the branches of the ascending pharyngeal, having an unusual size, and having undergone aneurismal change.

810. *Ingalls on Hysterical Aphonia.*—Dr. Ingalls commences his paper by giving a short account of the symptoms, diagnosis, and prognosis of hysterical aphonia, which, however, contains nothing of special interest. He then proceeds to describe the treatment which he believes to be most effectual. He finds strychnine, in full doses, of more value than all the other drugs which are recommended. This remedy should be given, first, in small doses, but those should be steadily increased until the physiological effects appear. He begins with a thirtieth of a grain three times a day, and steadily increases the dose, every day, or every second day, until a twelfth, a tenth, or even an eighth of a grain, is taken three times a day. It has been a surprise to him that most of these patients require to take very heroic doses, before any of the constitutional effects are manifested. He has had several cases in which from a tenth to an eighth of a grain had to be given, three times daily, before any of the constitutional effects could be detected. And until these occurred, but little benefit had been experienced. As soon as twitching or stiffness of the muscles, or intense nervousness, is noted, the dose should be reduced to that taken one or two days previously; and afterwards, owing to the increased susceptibility of the nervous system, it may be necessary to still further diminish the quantity, from time

to time, but the remedy must be continued in doses as large as can be borne for several weeks, in order to prevent recurrence of the attack. Electrical stimulation of the affected muscles and nerves is useful in protracted cases. In using electricity, Dr. Ingalls prefers the static variety applied externally. Next to it, he values the faradic current, and, lastly, the galvanic. Either of the latter may sometimes be successfully applied externally; but, in obstinate cases, at least one electrode should be applied within the larynx, directly to the affected muscles. When the paralysis is of long-standing, and the muscles consequently partially atrophied, the latter course seems to be especially advisable. Dr. Ingalls gives some cases illustrating the effect of the above treatment. One of these is interesting from the fact that it was not difficult to restore the voice, but it was found impossible to maintain it for any length of time until the heroic doses of strychnine were adopted.

811. *Downie on Unusually Large Nasal Polypi, with Remarks on the Methods employed in their Removal.*—The first case was that of an old lady, seventy-four years of age. She had complained of obstruction of the left nostril of many years' duration. During the previous twelve months she had had frequent attacks of epistaxis from the affected nostril. On examination, a large mucous polypus was seen projecting slightly anteriorly, and also making its appearance in the post-nasal space. On pressing it aside with a probe the septum, against which the polypus pressed firmly, was seen to be eroded. Dr. Downie concluded that the hæmorrhage had its origin there. Chloroform was administered, and by means of a strong pair of forceps the polypus was removed. The blades of the forceps were made to grasp the lower edge of the middle turbinate bone, from which it sprang, and were then locked and left in position. At the end of two or three minutes they were given a little more than half a turn, by which the part was removed. No bleeding followed. The polypus measured 2¾ inches in length, and 1½ inches at its greatest depth. The second case was that of a woman, aged forty-nine, who had complained of nasal obstruction for many years. From the right nasal meatus a good sized polypus was removed. From the left side a polypus, measuring 3¼ inches in length, was removed, together with the lower edge of the middle spongy bone from which it sprang. It was divided into three lobes, two of which projected forwards, and one growing backwards, occupied the pharyngo-nasal space. The third case was that of a man who had had several polypi removed four years previously. A polypus, measuring upwards of 2½ inches in length, was removed, together with a scale of bone to which it was attached. Of the three methods of removing polypi, the forceps, the cold snare, and the galvano-caustic snare, Dr. Downie uses that which he considers best suited to the particular case. All the above cases were treated with a forceps of a special pattern. The blades are long, hollowed out along the centre line of their inner surface, and furnished with fine teeth along their edges, by means of which a good bite is taken. The handles are provided with a lock. In applying them, the meatus is dilated with a speculum (Lennox Browne's pattern by preference), and the naris is well illuminated by the forehead mirror. With the parts thus clearly in view, the opened blades are gently passed in so as to include the base of the polypus, along with a thin scale of the lower edge of the bone. They are then closed, locked, and left in position for two or three minutes. By this manœuvre the vessels are so crushed that little or no bleeding follows. The forceps are gently turned round. With half or two-thirds of a complete turn, the mass readily comes away. In the treatment of small polypi, Dr. Downie uses the galvano-caustic or cold wire snare, followed by cauterisation of the site of the growth.

Reviews.

ARTICLE 812.

ON PNEUMONIA.*

HERE we have to deal with two authors, who have written 450 pages on one disease. The first edition, published fourteen years ago, was of course smaller. It seems fatal that a second edition should always be larger than its predecessor, nevertheless it would be easy to point out passages which might be cut down, or altogether cut way, with advantage. In many subjects treated in the volume there is an uncertainty which, though it may be philosophical, is sometimes disappointing; for people are apt to consult a book of this kind to find guidance, instead of being told that all we know is that little can be known. For example, in considering the causes of pneumonia, after balancing, like a kite, between wind and moisture, and other meteorological conditions, the authors throw us back upon the popular notion that cold and dry air has a good deal to do with the production of the disease, though we are warned that "such observations are likely, however, to fall far short of demonstration." Sewer gas may also be a cause of the inflammation, and some contradictory authorities are quoted as to whether it may be produced by external violence. We should have lost nothing of consequence had the authors imitated Sir Thomas Watson, who gives the causes of pneumonia in six lines. Too many pages are assigned to the differential diagnosis of pneumonia. No doubt there are "sneaking forms," which may escape the detection of a careless practitioner, much in the same way as flour may be mistaken for powdered chalk, or saltpetre for snow; but, in almost all cases, pneumonia is a disease very easy to diagnose, and I should not be inclined to do much for medical men who confound it with scarlatina or typhus, save by advising them to give up the practice of medicine.

The chapter on the clinical history of pneumonia seems to me more mature than the one which deals with physical signs and progress. In dealing with auscultation and percussion, the authors simply reproduce what they have learned from well-known authorities. They scarcely add any criticisms, and have made no new experiments of their own. It is noteworthy how little the subject has advanced since Skoda wrote his searching criticism on the diagnostic value of auscultation and percussion.

The second part of the book deals with varieties and counterfeits, and occupies somewhat wide ground. They consider the association, not only with bronchitis and pulmonary œdema, but with acute rheumatism (pericarditis), delirium tremens, and specific fevers. Probably the greatest inconvenience of dealing, in a book, with a single disease of an important organ is, that it rarely occurs alone. It is always complicated with other diseases. One may separate pneumonia from pleurisy and bronchitis by definitions, but in reality they are inseparable.

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* "The Natural History and Relations of Pneumonia; its Causes Forms, and Treatment." By OCTAVIUS STURGES, M.D., and SIDNEY COUPLAND, M.D. London: Smith, Elder & Co. 1890

A good many pages are devoted to a discussion whether pneumonia is simply a diseased organ, plus the constitutional disturbance following upon such an inflammation, or a systemic disease associated with a local inflammation which has its own microbe. On this question the authors fluctuate in their opinion, though this seems to be more the fault of the conflicting evidence than any want of knowledge or of judgment on their part. The following passages show what they regard as the present position of the question:—(1) "Pneumonia is a specific, general disease, of which lobar inflammation of the lung is the local manifestation." (2) "The most constant cause of pneumonia is Fraenkel's diplococcus, but there are other viruses which may evoke it." (3) "Chill and other causes—some more, some less distinctly observed in that relation—are to be regarded only as secondary or predisposing." (4) "The pneumonic 'virus' may, and often does, excite inflammatory disturbance in other organs than the lungs and sometimes such inflammations may be excited without the lung participating." (5) "Exceptionally, pneumonia may be contagious." "Time will show," observe our prudent physicians, "whether or not these conclusions will be finally accepted."

In dealing with prognosis, Drs. Sturges and Coupland lay more stress upon constitutional signs than physical conditions. Throughout the book the authors appear as men possessing a good knowledge of the science as well as the art of medicine, with no favourite theory of their own. Here and there, we light on shrewd remarks, showing a wariness of belief which sometimes leads them to cast doubt upon what is at least very probable. We are told the assertion "that pneumonia is grave in proportion to its area, and most fatal to those who are already enfeebled, though it may seem like a truism, is not even true." If the two statements be made separately, they might be disputed, but taken together they constitute a truth.

Part III. deals with Etiology and Pathology, though the chapter on "Morbid Anatomy" has been already given in Part I. In the chapter on Bacteriology we are told about *bacillus* and the *diplococcus pneumoniæ*, and their appearance is exhibited by woodcuts; but we are reminded that "there is as yet hardly sufficient evidence to establish the dependence of the disease upon one specific virus. The arguments advanced by Dr. Sternberg, in support of the view that the microbe most responsible for exciting the actual inflammation of the lung is a normal denizen of the buccal secretions, are of great weight." They may, after all, be epiphytes on a soil already prepared for their sustenance.

Unlike the modern practitioners, who run from one remedy to another, the physicians of old had no misgivings about the correct treatment of pneumonia. "Hujus morbi curatio," wrote Sydenham, "in repetita venæsectione fere tota est." The elder Frank, in his public practice at Pavia, bled his patients twelve or fifteen times apiece. They dealt with the disease as a separate entity, with little regard to the state of the patient, and never fancied that their treatment really increased the mortality. The death-rate in the Edinburgh Infirmary (1839 and 1844) was 1 in 2·78. Skoda, giving scarcely any medicine, had a mortality of 1 in 7. Drs. Sturges and Coupland, while showing that a decline in the mortality of pneumonia is coincident, or nearly coincident, with the decline or abandonment of the practice of bleeding, observe that this "fact of itself witnesses nothing as to the relation between the disease and its supposed remedy." After this, it is perhaps prudent to assure their readers that they shall not willingly revert to the old system of treatment. They, however, approve of bleeding when the dyspnœa is urgent, and the lung solid, or mostly solid, taking from the arm eight or ten ounces, or more, in proportion to the relief given. They also recommend bleeding in pulmonary œdema. The authors doubt whether the statistical method can ever be applied to the question of the efficacy of the different treatments. At the end of their argument they remark, "The statistics derived from particular 'Schools,' or illustrating the practice of some individual who himself expounds it, are always the best; those that laborious compilers construct for themselves, regardless of persons or theories, from general hospital records, are always the worst. There is no other rule that works."

The authors have tried antipyrine without finding that the drug exerted a favourable influence, and "the fear of inducing cardiac depression often led to its withdrawal before it had produced the effect desired." Their trials of antifebrin were scarcely more encouraging.

At p. 436 we read, "Yet there is one medicine which, for its well-known service in cases of cardiac failure, is so obviously suggested in the treatment of pneumonia, that we cannot altogether pass it over, namely, digitalis." We are then told that there is no proof that this remedy has been used on any large scale or with success, and that they themselves have not found it efficacious in pneumonia. This so-called remedy might have been passed over, especially as it had been already mentioned with disapproval on a preceding page (396).

It seems to me that the chapters on treatment form the most valuable part of the book. A medical man, who has an anxious case of pneumonia, might well read them over, possibly to find some useful advice. The general outcome seems to be that most cases of pneumonia are, with ordinary care, sure of recovery; but in another, though smaller class, "the general final issue in life and death depends largely—we cannot, of course, say how largely—on treatment, the treatment, that is to say, of certain common symptoms, such as delirium, dyspnœa, and sleeplessness, of whose pernicious effect we are not more certain than of the validity of remedies in large measure to relieve them."

W. W. Ireland, M.D.

Article 813.

On Aphasia and the Localization of the Faculty of Speech. By Frederic Bateman, M.D. London: J. & A. Churchill.

This book is a treatise on aphasia, of which the first edition was published twenty years ago. Since that period immense strides have been made in the physiology and pathology of the brain. Localization and antiseptic surgery have opened up an apparently limitless field of study. Notwithstanding these advances, however, as the author remarks, we seem still to be to some extent on the threshold of the enquiry.

The first three chapters are devoted to bibliography, and give a clear account of the progress of the French, German, and English schools. The early literature of the subject is specially associated with the French writers. In 1825 Bouillard referred articulation to the frontal lobe; long afterwards Dax placed it in the left hemisphere; and Broca, in 1861, further narrowed it to "the posterior part of the third convolution of the left hemisphere," an area which he subsequently extended to the island of Reil and the extra-ventricular nucleus of the lenticular ganglion. A great deal of evidence, adverse to Broca's proposition, has been advanced by his own countrymen, including Charcot, Bernard, Trousseau, and Ladame. In addition, a number of cases are quoted from English and other writers where aphasia has been due to distant lesions, such as rupture of an orbital vessel, disease of spinal cord, or hæmorrhage into the pons. Two important cases, again, are mentioned where there was disease of the exact region of Broca without lesion of speech. The first is reported by Dr. Simpson, of the Gloucester County Asylum; the second by Dr. Foulis, of Glasgow. Dr. Bateman's own carefully-recorded series of cases also show Broca's original theory to be untenable. The author is careful to point out that lesion of speech is a symptom only, although for purposes of scientific enquiry it is convenient to regard it as a pathological entity. He uses the term aphasia in the widest sense as a title for the whole group of disorders of speech, including not only the loss, but all degrees of impairment, of the faculty. According to M. Charcot's scheme speech requires the following elements:—There must be sounds or signs suggesting an idea, and they must be transmitted to the sensorium by means of the ear or the eye; these reach the ideational centre, probably in the grey cortex, through one or more of the following: the common auditive centre, the auditive centre of words, the common visual centre, the visual centre of words. An idea is then created. There must be memory of the needful words or of signs to express this new-born idea. The internal image thus formed is transferred to the centre of articulate, or that of written language, which has the power of co-ordinating the movements necessary for the external manifestation of language. In discussing a case of aphasia, then, it is essential to enquire in what portion of this complex speech-track the impediment exists. The faculty of articulate language is by no means the only medium of thought and expression: there are three other interpreters in the voice, the countenance, and in gesture. The views of the majority of writers on the localising of the varieties of aphasia are shown graphically by a shaded outline of the left hemisphere. Aphemia is placed in Broca's area; motoragraphia just above it in tbe second frontal; word-blindness in the inferior parietal lobule and angular gyrus; word-deafness in the first, and verbal-amnesia in the second and third temporo-sphenoidal convolutions. There is a suggestive chapter on the jurisprudence of aphasia. The anthor concludes that none of the popular theories have yet been proven: but that the concurrence of derangements of speech with lesions of Broca's area are too frequent to be the result of mere chance. The numerous clinical cases form a valuable feature in this book. These illustrative records have been gathered from a wide range of reading and experience, and hardly any case of importance bearing on the subject appears to have escaped notice. As a work of reference, then, this volume will be indispensable to all who are interested in the study of nervous diseases.

DAVID WALSH.

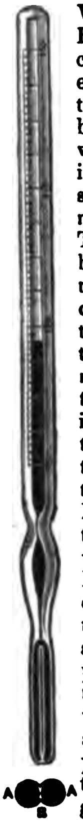
WHILE in attendance at the International Congress of Medicine at Berlin, Dr. Bantock removed an extra-peritoneal abdominal cyst from a patient in one of Professor Olshausen's wards. The woman has since made an excellent recovery.

New Articles.

"BOVININE."

IN the report on *Bovinine*, contained in our issue for July 20, in consequence of a printer's error, the quantity of coagulable albumen discoverable on analysis was stated to have been 8·2 per cent. This should have been from 18 to 20 per cent., and we hasten to correct an error which might give an inadequate idea of the nutritive value of this really excellent preparation.

HICK'S "DUPLEX INSTANTER CLINICAL" THERMOMETER.



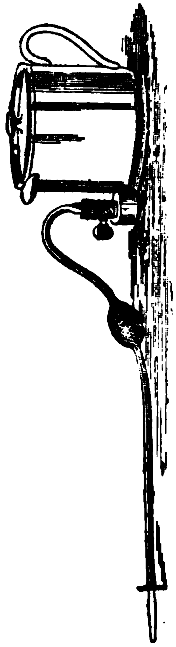
WE have had an opportunity of examining Hick's new patent "Duplex Instanter Clinical" thermometer, the object of which is to enable the temperature of the body to be taken in the shortest possible time. The bulb of the instrument (of which we give a wood cut, in order to give a better idea of its size and shape) consists of two tubes solidly mounted, thereby securing a maximum of strength with extreme sensitiveness. The flattened surface and small size of the bulb is well adapted for placing beneath the tongue, with less inconvenience than is the case with the ordinary instrument. We have tried it a number of times, in order to ascertain the time required to register the maximum temperature, and have found that twenty-five seconds is amply sufficient. It is hardly necessary to insist on the advantages attending this very great reduction in the time necessary for this observation both to the patient and to the busy practitioner. No practitioner who has once tried one of these rapidly registering thermometers would willingly go back to the common instrument. It is made with and without a magnifying index; but here, again, the ease with which the record can be read, even in a dim light, amptly compensates for the difference in price. The "Duplex Instanter Clinical" thermometer is readily cleansed, and, notwithstanding its small size, is in reality stronger than the average instrument, especially when furnished with the magnifying tube. We can confidently recommend it for general use.

THE "F.H." TEMPERATURE CHARTS.

THE value of clinical records depends almost entirely on accuracy of observation, and any modification ot existing charts which tends to facilitate and extend their sphere of usefulness is worthy of commendation. This object appears to us to have been attained in the "F.H." Temperature Chart (published by Mr. C. E. Gray, 32, Kennington Park Road, S.E.), which, for compactness and neatness, excels any we have yet met with. A not unimportant detail is their cheapness.

DEWAR'S EXTRA SPECIAL LIQUEUR, OLD HIGHLAND WHISKEY.—Some time since we analysed and gave a report on the fine old Whiskies of Messrs. Dewar and Sons, of Perth and London, and we now have pleasure in calling the attention of the profession to an extra quality of fine old spirit, guaranteed to be at least twenty years old (from the same firm), that has recently been under test in our laboratory. It is, as may be assumed from its age, perfectly free from fusil oil, is of moderate alcoholic strength, extremely mellow in flavour, and a pure alcoholic spirit. The physician who desires to prescribe a pure and reliable whiskey, has in the "Extra Special Liqueur" one of the best obtainable—in fact, of rare value. We are assured by the firm that this whiskey is the pick of the output of nearly 250 stills, and that the quantity from time to time obtained to replenish stock is very small, consequently it is a spirit very limited in quantity. Considering its great age, &c., its cost is very moderate

CROSSE'S SAFETY ENEMA PAN.



FROM the illustration below, the reader cannot fail to acknowledge the advantages presented by this simple and ingenious appliance and its arrangement. While especially adapted for hospital use and the sick chamber, it will be equally appreciated by that large body of the public of both sexes to whom the use of the enema is a necessity. The pan is made of earthenware with a small nozzle near the bottom, on which the enema is fixed, and this nozzle is made to fit any make of enema, and being fitted with a stop cock, the flow of contents can be arrested instantly, and reinjection can also be prevented. Those who use an enema will know the occasional annoyances of the present system, by the tube slipping out of the basin while in use; which it will be seen is absolutely impossible in Crosse's invention; neither can any air be admitted, and having a locked cover and being of a shape not likely to be overturned, the danger of overturning, or the contents being spilled, is almost impossible. In the inside of the pan a graduated scale is marked on the side, showing the quantity of water it holds at certain elevations. Nurses and those in attendance upon the sick must hail this new invention as a great boon to their labours. It is made bn Mr. William Toogood, Burlington Buildings, Heddoy Street, Regent Street.

Patents.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37, *Chancery Lane, London, E.C.*]

12,682. Improvements in the tubes and regulators of feeding bottles. JOHN FROST, 14, Bury Street, St. James', London, August 13th.

12,780. Improvements in beds for the use of invalids. WILLIAM WEBSTER WATSON, Temple Gardens, Temple, London, August 14th

12,941. Improvements in preserving devices for lungs. EMIL GIESLER, 37, Chancery Lane, London, August 18th.

13,150. Improvements in truss for hernia. FREDK. ALBON, 12, King Square, London, August 22nd.

13,409 Improved means for providing for the respiration of fresh or medicated air, by invalid persons or others. MERIADE ANQUEY, 18, Buckingham Street, Strand, London, August 26th.

13,479. A new and improved supporting apparatus, for the use of invalids or crippled persons. NILS GULBRAND TANBERG, Hartley House, South End Road, Hampstead, London, August 27th.

13,501. Machines for coating and polishing pills and similar articles. CHARLES EBENEZER CHALLIS, 30, Navarino Road, Hackney, London, August 27th.

13,736. An improved portable inhaler. SIDNEY WESTBROOK IOWERTH JOSEPH, 151, Strand, London, September 1st.

13,949. An improved form of dental impression tray. RICHARD BRADBURY, 1, Church Terrace, Oldham, September 5th.

SPECIFICATIONS PUBLISHED.

15,951. DAVIS. Surgical instrument. 1889. 8d.
8,536. MCCONAGHY. Artificial teeth. 1890. 6d.
9,892. CARTWRIGHT. Infants' teats. 1890. 6d.
14,727. BURCH. Respirator. 1889. 8d.

The above specifications may be had of Messrs. Rayner & Cassell, Patent Agents, 37, Chancery Lane, London, W.C., at the prices quoted.

[Should any of our readers desire to take out patents for inventions, either English or Foreign, and require advice upon the subject, the "Patent" Editor will be pleased to give them the benefit of his knowledge and experience. Communications addressed to the "Patent" Editor. *Medical Recorder*, 13, Waterloo Place, Regent St., S.W., will receive prompt attention.]

Miscellany.

THE Liquor Carnis Company, Holborn Viaduct, have introduced the earthenware pen rest, now so largely used, with a washable memorandum plate in the centre, and (of course) a mention of Liquor Carnis round the sides, &c. They will send one of these to any medical man who will write for one, as well as a sample bottle of the "Liquor Carnis."

THE MEATH HOSPITAL.—The Annual Dinner will take place Monday, October 6th, at Shelbourne Hotel, Dublin, at 7 or 8 p.m., Sir Rawdon Macnamara, F.R.C.S., in the chair. Old students wishing to dine are requested to apply to L. H. Ormsby, F.R.C S., Hon. Treasurer.

QUEEN'S COLLEGE, BIRMINGHAM.—During the past year the anatomical collection has been removed from the former museum, which is now devoted solely to pathology, and placed in a building by itself. This collection, during the same period, has been largely augmented by a set of frozen sections, permanent brain preparations, embryological and other models. The new and larger pathological laboratory, completely fitted, has been opened. The management of the details of the medical faculty has been placed in the hands of a dean, and Professor Windle has been elected to fill that position.

The London Medical Recorder.

ARTICLE 814.

THE MONTHLY MIRROR OF MEDICINE.

Two Clinical Lectures on Graves's Disease, delivered at Brompton Consumption Hospital, by Dr. Hector Mackenzie, and just published in the *Lancet*, are well deserving of study. The first lecture is devoted principally to the discussion of the less well-known symptoms of the disease; while the second contains an account of the course, terminations, pathology, and treatment of the malady. Particulars are given of twenty-eight cases, illustrating most of the points touched upon by the lecturer. These lectures form a very complete account of the disease, and very copious references are given to the literature of the subject. They are, however, by no means a mere compilation, but contain much that is original and suggestive, and many practical clinical observations.

On the question of the causation of the disease, Dr. Mackenzie lays some stress on fright and mental shock as a causative influence. Among his own cases, seven dated their illness from frights, and shocks of various kinds. In describing the less common symptoms of the disease, Dr. Mackenzie dwells especially upon the tremors observed in these cases. As he remarks, the failure, until a few years ago, to recognize this really cardinal symptom, is a curious instance of intellectual blindness. It is rarely absent, and yet it is only in recent years that the symptom has been described. Thanks to Marie and Charcot, this symptom seems pretty well known in France; but in this country it is by no means so well recognised. If a patient, the subject of this disease, hold out his hands, a tremor in them is very perceptible, consisting of vibratory movements of small amplitude, and exactly the same kind as is noticed when the muscles are overfatigued. The tremor affects, not the fingers individually, but the whole extremity, and sometimes the whole body, so that it may be observed in the lower extremity as well as the upper. In some cases it is more marked on one side of the body. Dr. Mackenzie found that painful cramps were very frequent among his patients. In fact, out of fifteen of whom he inquired, thirteen were found to be subject to them. The feet and legs were most frequently affected, but sometimes the hands only were attacked. The interesting pigmentary changes which have been noted as occurring in cases of Graves's disease were exemplified in five of Dr. Mackenzie's cases. The parts generally affected were the face, the neck, the side of the chest, the abdomen, the lumbar region, the axillæ and the flexors of the arms and thighs. The colour of these parts was of a more or less dark brown, contrasting strongly with the normal colour of the skin, as shown on the front of the chest. On the question of prognosis, it is generally admitted that, when incomplete, the disease is rarely fatal. When well marked, however, there is reason to believe, as Dr. Mackenzie shows, that it is dangerous to life. Of ten patients who were in St. Thomas's Hospital during the years 1878-80, Dr. Mackenzie was able to trace six. Of these three were dead, one still suffered from the disease, and two had recovered. Dr. Hale White found that of twelve patients who had been in Guy's Hospital, in recent years, seven had died, four had recovered, and one was still suffering from the disease. It must be remembered that these were cases which had been admitted into the hospital, and presumably, therefore, severe cases. It is evident, however, from the recorded cases, that complete recovery is more common than death. The duration of the disease is, as a rule, to be measured by years.

In discussing the pathology of the disease, Dr. Mackenzie refers to the various theories which have been propounded. The recent tendency has been to lay the burden of the disease on the central nervous system, and to fix the seat of the lesion in certain nuclei about the fourth ventricle. Filehne, in experimenting on animals, claimed to have produced exophthalmos, enlargement of the thyroid, and increased cardiac action, by dividing the anterior fourth of the restiform bodies. Dr. Mackenzie, however, thinks that it is unscientific to draw any conclusions from an isolated and uncorroborated experiment of this kind. The symptoms of the disease, he considers, indicate a more widely-spread affection than any mere limited lesion of the bulbar nuclei, and he thinks it is both useful and instructive to enquire how this group of symptoms have become associated together, so as to form a disease. Fright, intense grief, and other profound emotional disturbances have been recognised as causes of the disease, but, probably, two little attention has been paid to the resemblance between the chronic symptoms of Graves's disease and the more immediate effects of terror. The descriptions, given by Darwin and Sir Charles Bell, of the condition of man in intense fear might almost have been written with regard to one of these patients. The heart beats quickly and violently. There is trembling of all the muscles of the body. The eyes start forward, and the uncovered and protruding eyeballs are fixed on the object of terror. The surface breaks out into a cold, clammy sweat. The intestines are affected. The skin is flushed over the face and neck down to the clavicles. There are two or three minor symptoms of Graves's disease, whose independent occurrence under the influence of emotions is well known. These are pigmentary changes in the skin and hair, falling out of the hair, and epistaxis. It is true there is no information as regards the enlargement of the thyroid under the influence of profound emotional disturbance, but the fact that this enlargment takes place in those cases where the symptoms develop rapidly after such disturbance, points to some connection.

On the matter of treatment, Dr. Mackenzie says but little. He seems to regard belladonna as the most generally useful drug. He gives ten minims of the tincture three times a day, and finds most patients benefited from it. He has found some cases benefited by digitalis, though most are intolerant of it. Iodine internally, in any form, has aggravated many cases of the malady, though rare cases have derived benefit from it. Iron given alone, he thinks, is not beneficial. He makes no mention of strophanthus, which some observers have strongly recommended. It is interesting to contrast Dr. Mackenzie's remarks on the treatment of this malady with those of Dr. Russell Reynolds, in a paper published some months ago, in the *Lancet*, and to which we briefly referred in our Mirror of June last. The treatment Dr. Reynolds adopted in his cases was the administration of iodine, bromine, and iron in combination. He asserts that it is only when these three are taken together that much relief is attained. When the goître is large, and the exophthalmus highly marked, he found that iodine could be given in doses of 10 and 15 grains, three times daily, with advantage. In a short paper which has just lately appeared in the *New York Medical Journal*, on the "Nature and Treatment of Exophthalmic Goître," by Dr. Corning, the author describes a novel plan of treatment he has recourse to, with a view to neutralizing the morbid distribution of the circulation, and improving the nutrition of the patients. The patient is placed in a warm bath, at least once a day, for three-quarters of an hour, or more. When the derivative action of the bath has seemed inadequate, Dr. Corning applies elastic straps round the legs of the patient, adjusted in such a way as to interfere, more or less, with the venous circulation, but not with that of the arteries. Elastic pressure is also applied to the thyroid, and he has even bandaged the eyes during the immersion. He claims to have had good results from this method of treatment.

There have been several important contributions made lately to the study of the pathology of pernicious anæmia. We noticed Dr. Hunter's paper in our Mirror of May last. The latest contribution is by Dr. Mott in the August number of the *Practitioner*. It is based on a study of three fatal cases. One of these cases is of especial interest on account of the early age of the patient, a boy of eleven years. The following is a summary of the pathological changes found in the blood and organs. The blood showed microcytes, macrocytes, and nucleated corpuscles, together with poikilocytes. The spleen and marrow showed excess of iron albuminate, together with evidence of active formation of red blood-corpuscles. The liver exhibited branches of the hepatic vein blocked by granules of iron albuminate, and corpuscles which gave the iron reaction. Experiments have shown that blood artificially transferred is destroyed in the organism, the plasma more quickly than the corpuscles; and that the products of its destruction appear in parts in the urine. Quincke has shown that some of these products remain in certain tissues in the form of yellow or brown granules. They give the iron reaction with the greatest readiness, and are found in the liver and spleen and marrow of bone. Dr. Mott throws out the suggestion that pernicious anæmia may be an exaggeration of a normal physiological process analogous to diabetes. Under ordinary physiological conditions, there is a constant tendency to maintain the normal quantitative and qualitative standard of the blood. A physiological process takes place when a small quantity of glycogen is converted into sugar, but a pathological, as soon as it oversteps the normal. It is the same with a normal and an excessive hæmolytic process. When the absorption of the products of digestion occurs, the blood is replenished by new materials, and plethora would occur if there were not a proportional destruction of the plasma and corpuscles to form urea and pigments, which leave the body by the natural channels. The excessive hæmolytic process which occurs in pernicious anæmia may be due to a disturbance of the normal pigment-forming function of the liver, or we may consider it to be due to the absorption of some substance from the alimentary canal. Dr. Mott suggests peptone as a substance which has a very marked influence on the blood, and the absorption of which, unchanged, into the portal blood might give rise to increased hæmolysis. Another very attractive theory is the absorption of some chemical product of the growth of micro-organisms in the alimentary canal.

Dr. Donkin contributes in the *Lancet* a practical paper on the treatment of gastric ulcer. Well assured that avoidance of all food given by the mouth, thus keeping the stomach empty and at rest, is the shortest way of relieving the symptoms, he begins at once by giving the patient enemata of milk and beef-tea at short intervals. He gives nothing whatever by the mouth, not even ice, for many days. The patients are kept on enemata for a period varying from ten to twenty days, after which fluid nourishment is gradually given by the mouth. No drugs are given. The time thus saved in the cure of these cases is remarkable. After the resumption of solid food, iron and arsenic may be administered. The patients waste, more or less, considerably under the rectal alimentation, but they recover flesh again quickly. He has found no advantage from using peptonised enemata or suppositories.

ARTICLE 815.

THE MONTHLY MIRROR OF SURGERY.

THE surgery of the thyroid gland is a subject which will always be an attractive one to surgeons, mainly, perhaps, on account of the indefinite knowledge which exists in regard to the functions of the gland itself. Within recent years, however, despite the little we know of the gland, some of the most enterprising surgeons have not hesitated to deal with it surgically, according as they deemed fit. And, as is well known, Billroth has led the way in this connection. Extirpation of the gland has been found to result in that curious condition, described as cachexia strumipriva, in which symptoms of myxœdema become manifest. Kocher and Reverdin have chiefly drawn attention to this remarkable anomaly. This condition is one of cretinism, but occurs only when the entire gland has been removed, and more especially in young persons. So uniformly has this been the case, that it has become the rule never to extirpate the entire gland before puberty. Upon the subject of the surgery of the thyroid gland, Dr. A. H. Levings, of Appleton, Wisconsin, contributes a useful paper to the *Medical News* for last month. After discussing the various details in connection with enlargement of the thyroid, he makes some remarks upon the etiology of the disease, and points out that among the predisposing causes of goître are age, and especially the period of puberty. The menstrual period and pregnancy are apt to lead to a swelling of the gland, which is at first only vascular, but which often results in an increase of connective tissue, which is permanent. An increase of the circulation from nerve-irritation is also a cause, as seen in Basedow's disease. The blowing of wind-instruments, ascending mountains, lifting heavy weights, and imperfect return of the venous blood as in heart-disease (right side), may each be causative. It may be congenital. Some countries are almost entirely free, while in others, especially in valleys lying between high mountains, as in parts of Styria, Tyrol, and Switzerland, goître is endemic, and often epidemic. In some valleys nearly every inhabitant is affected. Not only those who have always lived there, but also those who for a considerable time made their residence there. The disease often attacks whole garrisons of soldiers and schools. In these regions where goître is so constant, idiots, mutes, and cretins form a large portion of the population. Individuals suffering from idiocy or cretinism generally have goître. In regard to the cause of goître, the author points out that Kocher, after examining 76,606 children, came to the conclusion that it depends upon the amount of organic matter contained in the drinking-water. Coming to the various modes of treatment, the author classifies them into five heads:—(1) The use of iodine; (2) electrolysis; (3) the treatment of the cysts; (4) ligation of the thyroid arteries; (5) extirpation. The treatment of goître by iodine externally, usually in the form of an ointment, and internally by the administration of iodide of potassium, has long been practised, and often with good results, especially in cases which have not attained a large size, and are not of long duration. The parenchymatous injection of tincture of iodine is followed by, however, much better results. It is especially applicable in cases of goître, which are soft, and which involve only a part of the gland. In advanced age a goître usually undergoes degeneration; becomes hard from the deposit of lime-salts; or large cysts with rigid walls are formed. In these cases injections are useless. Practised with strict anatomical and antiseptic precautions, injections are attended with but little danger. Of electrolysis the author states that this method of treatment promises well, and is practised by using a galvanic current of from six to eight cells. The electrodes are needles, which are thrust into the gland and moved about in its substance. Of fourteen cases so treated, six were entirely cured, and the rest benefited. There are three methods of dealing with the cysts:—(1) Puncture and injection of iodine; (2) incision; (3) enucleation. Where the cyst-walls are thin and single, the first method may be adopted; but where the cyst-walls are firm, and where several are in close contact, incision is best. In cysts with thick, rigid walls, or containing much solid matter, enucleation is to be preferred. The treatment of ligation of the thyroid arteries is fully described by the author; but, according to Billroth, the operation should only be performed in cases of goître that are well nourished. Practically, it is applicable to the same class of cases as are the parenchymatous injections. Performed under strict antiseptic precautions, the operation should be practically free from danger, though often difficult, and in well-selected cases it seems probable that it may take the place of the more radical and dangerous operation of extirpation. We append the description given by the author of Billroth's method of performing extirpation:—An incision is made in the median line, from near the sternum to the hyoid bone, and, if necessary, it may be extended on either side, or on both sides, in the form of the letter Y, to the sterno-mastoid muscles. The anterior jugular vein, and, perhaps, the external jugular, may be under the line of the incision; if so, they should be doubly ligated and incised. In separating the tissues, it will be found necessary to touch the sterno-hyoid and omo-hyoid if the gland is large. When the capsule of the gland has been reached, the knife should be laid aside, and all tissue doubly ligated before being cut. The dissection is made with dissecting forceps and with the fingers, the gland being shelled out first at the superior border of one side. Reaching the superior thyroid vessels, artery and vein, they are doubly ligated and incised; the dissection is carried down the same side until the inferior thyroid vessels are reached, which are also doubly ligated and cut. The greatest care should be exercised in this region not to injure the recurrent laryngeal nerve. The dissection is now carried below, tying the middle thyroid vein and artery, if the latter exists, separating the gland from the trachea, and ligating any vessels that may be found. The goître is then lifted from its bed, and the vessels on the opposite side tied. The wound is irrigated and drained, united with continuous silk suture, and a large antiseptic dressing applied. In order to avoid hæmorrhage, Billroth lays down the rule that as soon as the capsule of the gland has been reached, the knife must be laid aside and the tissues doubly ligated before they are divided.

In the *Revue de Chirurgie* for September, the report of a paper by Krause, of Halle, is published, which was read before the Congress of German Surgeons. In it he discusses the treatment of tubercular joints by injections of iodoform. Altogether he has treated by this method thirty-six cases of white swelling of the knee, thirteen cases of morbus coxæ, six cases of tubercular disease of joints in the foot, and five of the hand. He has had successful results in fifteen knee cases, four of the hips, one of the foot, and three of the hand; and all these remained well a year after the operation. In some of the cases, after this method had failed, it was necessary to perform resection, arthrectomy, or amputation. Two of the patients suffering from tubercular knee-joints died in spite of the iodoform injections, one from pulmonary tuberculosis, and the other from acute miliary tuberculosis; the best results were obtained in the hand and knee cases. In a few instances the movements of the joint were restored. Several injections must be made; but it is not essential to keep the patients in the hospital, nor to keep them constantly in bed. The author showed four patients at the meeting, who had been suffering from tubercular knee-joints of a severe form, each of whom he had treated by his injection method. In one man, of twenty, amputation had been suggested; the joint, however, was cured in the space of four months by the use of four injections of from 20 to 40 grammes each; a child, of eight, was shown quite well, in whom the same treatment had been practised, the movements of the joint being almost perfect. When abscesses develop round the joints, communicating with the latter, the pus is let out, and the cavity is thoroughly douched with boracic lotion until the fluid returns nearly clear; then the iodoform injection is made.

An instance of congenital enlargement of the thyroid is recorded, by Mr. Lennox Browne, in the *Lancet* of August 9th. The patient was a girl aged ten, and the tumour was large and irregular, about the size of a fœtal head at seven months. Extirpation was practised by Mr. Browne, by the following method:—An elliptical incision was made surrounding the left portion of the tumour that was incorporated with the skin, which was there sacrificed. Elsewhere the tumour was dissected out without difficulty; the hæmorrhage, which did not amount to an ounce in quantity, was for the most part controlled by torsion; two ligatures were employed to secure the base. The portion removed included the left lobe and isthmus of the thyroid body, and a portion of the right lobe. In about two months the wound had entirely healed over, and the patient was quite convalescent. The tumour, on examination, proved to be a fibro-cystic goître.

In connection with the subject of the extirpation of goître, the fact has been pointed out, and is now well recognised, that tetanus is by no means an infrequent result of removal of the thyroid. In some experiments conducted by Eiselberg upon animals—cats—it was found that total removal of the gland, in thirty-three cases, was invariably followed by tetanus; and the appearance of this sequel was not prevented by transplantation of thyroid substance under the skin, in the peritoneal cavity, or between the peritoneum and abdominal wall, whether such transplantation was made before or after the operation. In twenty-seven extirpations of one-half of the thyroid, tetanus was not observed in a single instance. According to the author, the development of tetanus, after operation upon the thyroid, is not influenced by wounds of the nerves, by personal idiosyncrasy, by sex, age, or any cause in connection with the wound; it depends entirely on the effect produced by the total removal of the gland. It has been determined by experiment, that, if less than one-fifth of the entire gland were left, tetanus will develop.

ARTICLE 816.

INTERNATIONAL MEDICAL CONGRESS, BERLIN.

THE general addresses delivered before the tenth International Medical Congress have for the most part appeared already in print, and a short account of the various papers read in the sectional meetings is all that this article professes to furnish. It is taken from the *Berliner klin. Wochenschr.*, No. 32, ff.

AUGUST 5.—*Medicine* (1).—Lepine (Lyons) and Grainger Stewart each read a paper on the treatment of chronic nephritis. Both advised milk and starchy foods as the chief nourishment, and neither knew any drug which could arrest the disease. Rosentein and Senator spoke hereon.

(2) "On the treatment of Phthisis, especially in Hospitals for Consumption." Papers were read by Hermann Weber (London) and A. S. Loomis (New York), and a discussion followed. The great success of such institutions as Göbersdorf and Falkenstein on the Continent, and Adirondack in America, was fully acknowledged by all, but the poor could not frequent such places. Cantani (Naples) thought the use of common salt very important, against and in phthisis. Ephraim Cutler (N.Y.) had observed that animals fed chiefly on food liable to lactic-acid fermentation, were prone to phthisis. Fürbringer warned his hearers against over-estimating the success of special institutions.

(3) "On the Increase of Cerebral Pressure, and its Phenomena." Adamkiewicz (Cracow).

(4) Oxamide calculi were shown by Ebstein and Nicolaier (Göttingen), as produced in dogs by special feeding.

(5) "The Operative Treatment of Non-purulent Pleuritic Exudations." (Paper by Lewaschew, of Kasan.) The author removes a little fluid, and replaces it by salt-solution. This is repeated from two to six times, till the exudation is replaced by "physiological" salt-solution, which is rapidly absorbed. Fürbringer preferred simple puncture; Guttman also.

(6) "Enuresis nocturna in Children." Van Tienhoven cured his cases by raising the pelvis during sleep.

(7) "On the Pathology of the Abdominal Sympathetic." Talma (Utrecht).

(8) "On Bacelli's sign—whispering voice, in pleuritic effusion." Rummo (Naples). Such a voice is heard by the ear placed on the abdomen, only when the fluid is serous. Rummo fully confirmed this. The quantity of fluid hardly affected the result; only its quality did this. Bacelli said that he was gratified that his sign was now generally recognized, but a slight confusion had crept in, for his sign had been bracketed with Guéneau de Mussy's, under a new term, "aphonic pectoriloquy," whereas the two things were quite separate.

Surgery.—(1) "On Surgical Osteogenesis." Ollier (Lyons).

(2) "On Tuberculous Ascites, and its treatment." Koenig (Göttingen). Laparatomy had given a favourable result, four deaths in thirteen cases; three from peritonitis, one from collapse. In eighty-four per cent. of his cases the ascites was caused by intestinal ulceration. Demosthène (Bucharest), Subbotic, and Kümmel (Hamburg) spoke; the latter had had eight cases out of nine cured by operation, but two afterwards died of peritonitis.

Obstetrics and Gynæcology.—Over one hundred papers and demonstrations being announced, it was agreed to limit speakers to ten minutes, and each discussion to five minutes. Thirteen sittings were arranged. "Antisepsis in Midwifery" was the first subject discussed. Galabin (London) being absent through illness, Slawjansky (St. Petersburg) read a paper of his own. In Russian lying-in institutions the mortality had steadily declined since the introduction of antisepsis, in 1887, from 0·48 per cent., in 1886, to 0·28 per cent. in 1889. These figures are still high; this was due to the number of operations required. Large institutions, rigidly antiseptically conducted, were preferable to smaller ones.

Hygiene.—Von Ziemssen invited the members to the Brunswick Meeting of the *Deutches Verein für öffentliche Gesundheitspflege*, in September.

(1) "The Hygienic and Moral Dangers of Prostitution." Thiry (Brussels) and Kaposi (Vienna). With this subject the next paper was also discussed, viz., "the significance of venereal diseases in the medical control of prostitutes" (Neisser, Breslau). Thiry proposed to restrict prostitution, as far as possible, to strictly supervised "maisons de tolerance," infected persons to be treated only in hospital. Kaposi (Vienna) urged that defensive measures should be not merely administrative, but penal. The Austrian Government punishes all persons who conceal any infective disease. He also urged isolation in special houses. Neisser spoke more exclusively of the medical control of prostitutes. It was important to examine microscopically for gonococci. Several speakers followed; among whom Felix, Drysdale, Heinsinger, and Crocq strongly opposed limiting prostitution to public brothels. Neumann would "intern" all syphilitic patients for two years in special asylums. Thus opinions differed widely on the subject.

AUGUST 6.—*Hygiene.*—Roux (Paris) sent a paper on "Measures to be adopted against the Spread of Diphtheria." The diagnosis (through bacteriology) may be made by the middle of the second day. The treatment, viz., antiseptic gargles, should last more than two weeks. Isolation was imperative, and subsequent disinfection of the house, where possible, by boiling water or steam. Löffler (Grifswald) followed similarly. Local antisepsis was the key-note of treatment, for about a month. Animal diphtheria was quite a different thing from the human kind. It was very improbable that diphtheria could be transferred from animals, even by cow's milk. As to predisposition, Löffler thought previous lesion of the mucous membrane not essential to infection. His gargle was sublimate solution (1 in 10,000), with aromatics. He would use hot sublimate solution for the clothes and houses. Meteorological influences were, as yet, not proven. Finally, no one now doubted the specificity of the Klebs-Lœffler bacillus. A long discussion followed.

Obstetrics and Gynæcology.—Stadfeldt (Copenhagen) gave the "Results in Scandinavian Lying-in Institutions." (1) Rigid antisepsis had given splendid results; it had reduced the deaths from 4 per cent. to 0·4 per cent. (2) It is easier to supervise in public buildings than in private. (3) It is beneficial also to the newly born. (4) Irrigation by nurses is often dangerous. Still, they should not be restricted to external examination as a principle. (5) The expulsion of the placenta should be hastened. Fritsch (Breslau) said that no carbolic acid, no local treatment, should be used with healthy women. Döderlein (Leipsig) observed that the normal secretion is acid, holding flat epithelium and only bacilli; pathological secretion is less acid, and holds pus-cells and all sorts of cocci. Priestley (London) described the beneficial effects of antisepsis in large lying-in hospitals. The sublimate-solution was 1 in 4,000. Leopold (Dresden) demonstrated some rare cases; amongst others an interstitial pregnancy, a tubo-ovarian pregnancy, and a pure ovarian pregnancy, in a woman aged seventy-five, who had carried the ovum (lithopædion) for thirty-five years. Barbour (Edinburgh) showed frozen sections at the eighth month, and explained the stages of labour. Dührsen (Berlin) brought forward two patients in whom he had made deep incisions of the portio; in one case to hasten delivery in eclampsia, in another to save the child. Neugebauer showed a preparation of ruptured uterus due to a fall from a window; the child (saved *post mortem matris*) lay free in the abdomen. Olshausen showed a uterus removed nine and a-half years ago, for cancer (the patient is still free from relapse); also a patient on whom he had twice performed extirpation of a tubal ovum—the first time on the right side (the child still lives), the second time in the left side (a three months' gravidity). Calderiné (Parma) showed myomata, enucleated from the uterus. Van Ott (St. Petersburg) discoursed on "the attendant phenomena of menstruation." He concluded that the vital energies reach their maximum shortly before menstruation, and at its close sink to a minimum. These variations are periodic, during the child-bearing age only. Marocco (Rome) showed an instrument for plugging the uterus. Olshaussen presented the members with memorial copies of the *Zeitschrift für Geburtshülfe und Gynækologie* on behalf of the Gesellschaft of that ilk. Williams (London) read a paper on the proposed theme, "Virginal Extirpation of the Uterus." In cancer of the cervix, or the portio vaginalis, total extirpation should always be performed; high amputation of the portio should be rejected, for relapses always start from the cicatrix, and cancer is already often present in the body of the uterus. Schauta (Prague) took the same view in his paper. Further indications for total extirpation are myomata, prolapse, and relapsing glandular endometritis. Pozzi (Paris) also strongly recommended total extirpation, not more difficult than the partial; he rejects ligaturing *en masse*. The fourth paper on the same subject was by Olshausen, who had had 14 deaths in 163 total extirpations. Of 10 of his cases, 19 were free from relapse for two years He opens Douglas' pouch before applying the first mass-ligature. The least diseased side of the adnexa is first ligatured. Finally, the peritoneum is closed by suture. Sajajtzky (Moscow) reported sixty-five total extirpations; he thought the operation almost without danger. Martin (Berlin) would extend it to persistent metrorrhagia. Kaltenbach (Halle) reported two deaths in eighty operations. The relapses were very numerous; they increased as the investigation was closer. Several other speakers followed; Czerny (Heidelberg) recommending the sacral method.

AUGUST 6.—*Medicine.*—(1) Roussel (Paris) demonstrated his apparatus for immediate blood-transfusion.

(2) J. H. Kimmel (Ohio). A paper on "Milk-sickness." This is observed in the West of America, on land recently brought into cultivation. It first affects herbivora, then man. General depression and digestive disorder, with vomiting and constipation, characterize it; temperature and pulse are low; death occasionally occurs. The author gave capsicum and laxatives.

(3) Andrew H. Smith (N.Y.) "Some Considerations in regard to acute obstructive diseases of the lungs."

(4) Goldflam (Warsaw). "On a peculiar kind of periodic, auto-intoxicative paralysis."

(5) Kollmann (Leipsig). "On pseudo-microbes in normal human blood." The author would warn the meeting against mistaking such for parasitic organisms. Gualdi (Rome) was of opinion that any one who had seen true malaria plasmodes would easily recognise them. They may be stained, but vacuoles remain unstained.

(6) Myers (Indiana). "Chyluria, non-parasitic, and non-tropical."

(7) Ferrannini. "On functional gastric derangements; their pathological mechanism and treatment in various gastric diseases."

Surgery.—Chaput (Paris) spoke of enterorrhaphy and "anus præter naturalis of three kinds, viz., simple, inaccessible, and complicated."

Biondi (Bologna) reported briefly his investigations on the thyroid body. The secreted products collect in the acini, and pass in part into the lymph-glands. The acinal epithelium gradually flattens and passes into the endothelium of the lymph-glands. If intra-capsular extirpation be effected, no evil results follow. Embryonal nests replace the organ.

Rossander (Stockholm). "Struma: its appearance and treatment in Sweden." It is rare here, except in Dalecarlia, where every third or fourth woman shows enlarged thyroid. In thirty-four cases of total extirpation, the author saw no cachexia, nor myxœdema, because he operated late, and thus gave other organs (spleen) time to take up the function of the thyroid.

Bockheimer (Frankfort). "A rare case of hernia."

Orthopædic Surgery.—The section owed its origin to Schaffer (N.Y.).

(1) Introductory paper by Schaffer (N.Y.). "On the limits and aims of Orthopædic Surgery."

(2) Landerer (Leipsig). "On the treatment of flat-foot." Slight degrees the author would treat by special shoes, splints with elastic bands (Myrop, Barwell, Lorenz), and massage was extremely useful in painful flat-foot. Higher degrees required forcible "redressement" and plastic-bandages, but the consequences were often only temporary. Osteomia supra-malleolaris in extreme deformity was the quickest and most certain procedure.

Discussion.—Lorenz (Vienna) gave his method of treating spastic flat-foot. He overcame the spasm by cocaine-injection (0·025 or 0·050 of a 5 per cent. solution), and then applied a portable plaster-bandage. In old cases, he forcibly redresses, with tenotomy of the pronators. Osteotomy is rejected. Von Mosengeil (Bonn) considered as the starting-point neither bones nor muscles, but the periarticular connective tissues, and recommended massage. Schreiber (Augsburg) gave indications for the extirpation of the talus. Frendenhenburg (Bonn) reserves supra-malleolar osteotomy for severe grades of flat-foot. Hoffa (Würzburg) would adopt it after section of Achilles' tendon had failed. MacEwen (Glasgow) thought they had fewer cases in Germany than in Scotland. There were two kinds—the acquired and the congenital. In the latter, the talus was dislocated in the manner described by Humphrey, also Symington; but this deformity is no criterion of the severity of the case. Osteotomic operations were necessary in the congenital kind. Bradford (Boston) said that in America the usual treatment was massage, and a steel plate in the shoe.

Midwifery and Gynæcology.—Schetz (Rostock) described the causes usually assumed for the rotation of the fœtal head in the pelvis; the real cause was, that the head was egg-shaped, and the neck was inserted to its equator.

Zwrifel (Leipsig). "A contribution to the theory of mechanism of birth." The author demonstrated a frozen section at the tenth lunar month, plainly showing a connective tissue-cavity between the bladder and the uterus, and between the uterus and the rectum. He then explained rotation in labour. The rotation of the child's back did not precede that of the head, but followed it. Veit (Berlin) remarked that no mechanism was necessary for the pelvic width—the head was already in the pelvis before labour.

Pestalozza (Pavia) described the influence of labour on the fœtal pulse.

Skutsch (Jena). "On pelvic measurement." The old methods were insufficient to indicate Cæsarian section. His method was "Into-extern messung" (internal-external measurement); *i.e.*, from the greater external measures the smaller internal were subtracted. The difference was the desired average.

Kuestner (Dorpat). "On the origin of amniotic bands."

Stuart Nairne (Glasgow), *re* "Causes of incontinentia urinæ in women," had found in two cases a floating membrane projecting from the bladder into the urethra. He had cured by cutting and cauterizing this.

Neugebauer (senior), of Warsaw, described a case of "chronic inversion of the uterus, cured by inserting a colpeurinther."

Schultze (Jena) spoke of the indication "des Tastbefundes" (of the results of digital examination).

Cutler (N.Y.) demonstrated his stem-pessary.

More Madden (N.Y.). "On the treatment of dysmenorrhœa," and described an instrument for dilating the cervix. The same also spoke on the treatment of cystitis in women, and gave his usual treatment: washing out the bladder four times daily with borax solution, abrasion of the mucous membrane, after dilatation of the urethra, and wiping out the bladder, with a carbolic acid and glycerine swabbing.

Freund (W. A.), Strasburg, showed frozen sections of the female sexual organs.

Mackenroth (Berlin) showed gynæcological preparations, obtained from Martin's laparatomies.

Kaltenbach showed seven uteri removed (vaginally) for sarcoma.

Routh (London) showed a pessary; Sabatier (Lyons), a peculiar sacral deformity; Brosse (Berlin), an apparatus of Hirschmann, for using "street-electricity" in medicine, and Hillischer (Vienna) an apparatus for (N_2O) narcosis.

AUG. 7.—*Medicine.*—After a paper by Nercadovic (Hungary) on the "Influence of a Malarial Neighbourhood on Infectious Diseases," the great debate of the day commenced, viz., on the treatment of diabetes. Pavy (London), Dujardin-Beaumetz (Paris), and Seegen (Vienna) each read or sent a paper on this subject. The first-named considered that the treatment should be almost purely dietetic, viz., the usual restrictive one, but opium or codeine, or morphine, was sometimes useful. Dujardin-Beaumetz's was read (in German) by Ewald. The dietetic treatment survived all the different theories of diabetes, which could not be divided into glycosuria and diabetes mellitus, the difference being merely one of degree. The prognosis was always favourable if all sugar disappeared from the urine after a fortnight's rigid abstinence from carbo-hydrates. Perfect cure was rare. It was strange that it was so difficult to induce diabetes in healthy subjects by giving sugar, and as strange that even in diabetes the sugar-amount in the urine was not materially increased when carbo-hydrates were given in the food. Psychic influences were of importance etiologically. We still wanted a good diabetic bread. Fruits and milk should be quite avoided, also alcohol; saccharin was useful to sweeten. Gymnastics were good, also hydrotherapy, and especially the internal use of alkaline waters. Quinine, potassium bromide, and antipyrin were all useful. Seegen's theory demands more notice. His experimental results were summed up as follows:—(1) The liver forms sugar continuously. Sixty experiments showed that the blood flowing from the liver always holds more sugar than the blood flowing into it. (2) The sugar is not from liver-amylum, as C. Bernard supposed. The sugar-amount increases for some hours after death, while the glycogen remains unaltered. (3) The sugar is derived from albumens and fats. (4) In a dog, weighing 10 kilogrammes, more than 100 grammes are secreted daily; in a man, proportionably, about 500 or 600 grammes. (5) The sugar formed in the liver is destroyed and used up in the tissues. Much carbon is required for all this sugar-formation, one of the most important functions of the body, and the source of warmth and work. (6) Glycogen is formed out of carbo-hydrates, but its destiny is not known experimentally; it is apparently changed into fat, to serve as a reserve-store for sugar-formation. From the above, Seegen concludes that the excreted sugar in slight diabetes is all derived from the food, the liver-cells having lost the power of converting carbo-hydrates into glycogen. In the severe form (sharply separated from the slight form) sugar is still excreted, even when no carbohydrates are given. The cells of the body generally have lost their capacity for oxydising the sugar formed in the body out of albumen and fat. Diabetes is dark to us as regards its essential cause. Nervous derangement comes first, then heredity. All subjects which strongly influence the nervous system—*e.g.*, chloroform, morphium, curare—may cause diabetes, which is also permanently induced in animals by extirpation of the pancreas (Mintowsky). The light form of diabetes may pass into the severe. The amount of sugar in the urine was not the true index of the disease. As regards flesh-diet, the speaker was as rigid as the foregoing, but had never seen complete cures by it, as asserted by Cantani. The patient must persist in his special diet all his life long, and not relax when the urine is free from sugar. A little bread (40 to 60 grammes daily) was unavoidable in this permanent diet, but the patient must not gorge animal food. He requires no more of it than healthy people. Green vegetables were freely available, fruits (not sweet) moderately. Claret was allowed, also beer (half-a-litre daily). Alkaline mineral-waters came next to the diet. Young patients benefited by iron-waters holding arsenic, *e.g.*, Roncegno, Levico, and Guber.

Discussion on the above paper followed.

Lepine (Lyons). The defibrinated blood of an animal quickly lost its sugar at 40°, whereas, if the pancreas were previously removed, the blood long retained its sugar. In the latter case, there was probably absence of some sugar-destroying ferment.

Cantani used the albumen and fat diet only in "alimentary diabetes; it was almost or quite useless in the neurogenous form. Opium was injurious.

Lewaschew (Kasan) read a paper "On the Treatment of Diabetes Mellitus by Syzygium Jambolana," an East Indian plant, which is a strong anti-diabetic, of long-persisting effect.

E. de Rienzi and C. Reale (Naples). "On the Origin and Treatment of Diabetes Mellitus." Besides extirpation of the pancreas, extirpation of the duodenum, also of the salivary glands, could cause diabetes. Clinically, the loss of salivary juice was a remarkable symptom. Most probably, a ferment is present in various organs, which ferment can destroy sugar. The treatment was dietetic—chiefly green vegetables and animal food together.

Minkowski warned the meeting against the practical adoption of improved theories. "Pancreatic" diabetes doubtless occurred in practice. Mirvra (Tokio) had found soya-beans good, but not long tolerated. He recommended antipyrin, massage, baths, also sodium. salicylate. E. J. EDWARDES, M.D.

(To be concluded.)

ARTICLE 817.

ON THE INVESTIGATION OF LEPROSY.

The following are abstracts of remarks and suggestions—from the journal* of the Leprosy Investigation Committee—by some well-known authorities on Leprosy, furnished in response to the request of the Committee:—

Sir William Moore suggests that a clear definition be given of leprosy. He considers Dr. Carter's classification of it the most suitable. viz., L. maculosa, L. anæsthesia, and L. tuberculosa: but this does not cover the whole, as there is a phase commencing with the ulceration of the fingers and toes without preceding anæsthesia, skin affection, or tubercles, and also a form with shrivelling or drying of the fingers and toes, which drop off without, or with only slight discharge, and another which commences by absorption of articulating surfaces which may end in ankylosis, or in spontaneous amputation, as in ainhum—a condition he has seen associated with leprosy. Facts show that none of the agencies—climatic heat, unsanitary conditions, want of salt, vegetable diet, fish-diet, lime in water, malaria—to which leprosy has been attributed are the real cause. That fish-diet is not responsible is evident from leprosy prevailing in the semi-desert districts of Western India where the people never see fish, and by its not prevailing especially among great fish-eaters—Parsees, for example. Sir William Moore alludes to his view, "that Leprosy is a phase of inherited syphilis, communicated, however, by inoculation," and observes that although the connection between the two diseases cannot be confidently asserted, their frequent similarity of symptoms, etc., justify further attention to the subject. With reference to heredity and contagion, the existence of leper families in India cannot be ignored. There is no doubt that lepers have more leper children than non-lepers; but children of lepers are more liable to contagion. After the number of cases which have been reported, there seems no reasonable doubt that leprosy may be communicated from one individual to another; an instance in point is cited. With regard to segregation, Sir Wm. Moore considers a wholesale measure of the kind impracticable, the latent and many early cases could not be shut up, and in many parts of India wholesale segregation would not be tolerated. Advancing civilization, and sanitation in its most extended sense, will have more effect in reducing leprosy in India.

Surgeon-General Beatson regards leprosy not as an entity originating and existing apart from man, but as a morbid action of the human organism, originating under conditions opposed to healthy life, growth, etc. He considers that although it did not originate as a contagion or germ, it can, nevertheless, be a contagious disease. For it is quite conceivable that, under deranged action of the living, or decomposition of the dead tissues, products may be formed capable of setting up similar action in the tissues of other individuals, and such products may be transferred either by inoculation or by means of bacterial germs, such germs being not the disease itself, but the carriers of morbific matter. According to this theory in dealing with leprosy, antidotes or purely medical treatment, and the establishment of leper hospitals, etc., while beneficial to individual lepers, will be ineffectual towards the extirpation of the disease, because leprosy can only cease when the life-habits of infected races have been changed, and the insanitary conditions in which it originates have been removed. Segregation, if absolute and complete, can at most only prevent the transmission of the disease from individual to individual. The life-imprisonment of all lepers, and separation of the sexes, would be necessary. The cost of such establishments would, perhaps, be better employed in more comprehensive measures of sanitation.

Prof. H. Cayley, of Netley, was convinced in India of the contagiousness of leprosy, and gives two examples. The stage of the disease in which it is contagious, and how the virus is communicated, are two most important points for elucidation. With regard to heredity, his impression in India was that contagion quite explained all the apparent instances. In reference to fish, leprosy is common in the Western Himalayas, where the people do not and cannot get fish. He gives an instance of cases of leprosy in the family of a strict caste of Hindus: one may say with certainty that for many generations no member of the family had ever eaten fish.

Dr. Patrick Manson suggests that it might be well to approach the Chinese Government, whose interest in leprosy ought to be very great, with its hundreds of thousands of leper-subjects at present utterly neglected. He points out that in order to attain the main objects of the present movement—viz., the prevention of the spread of the disease and its ultimate extinction—the subsidizing and encouragement of special pathological researches is essential. Without scientific guidance the efforts of philanthropists and Governments can only be blind, ineffective groping, and wasteful of time and money. He alludes to his former suggestive observations on the micro-organisms of "leper juice," and proposes a working hypothesis compatible with what has been already ascertained concerning the bacillus. By this hypothesis the vagaries of the so-called heredity of leprosy can be explained, as well as the periods of quiescence of the disease, its prolonged incubation in so many cases, the difficulty of inoculating animals, and other points. He assumes that leprosy is communicable, directly or indirectly. The difficulty of establishing this in a disease with so long an incubation must be very great. It is doubtful if syphilis, or hydrophobia, would, at the present day, even be known to be contagious, inoculable diseases, were the fact of inoculation not strongly indicated by such accentuated phenomena as impure sexual connection in the one case and the bite of a rabid dog in the other. Dr. Manson suggests that a man of experience of the disease, who has shown himself to be a capable worker, be placed in charge of a large leper asylum, with a good pathologist and bacteriologist, and laboratory, to work out the life-history of the bacillus lepra.

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* *Journal of the Leprosy Investigation Committee*, No. 1.

Dr. John Murray writes that he is of opinion that the children of leprous parents are very liable to be affected; but the disease does not invariably appear in the first generation. He considers that it is communicable from the sick to those who are well, probably through a broken surface, and that it may be communicated by inoculation. For the cure of the disease he has exhibited most of the medicines of the Pharmacopœia, with temporary relief in many cases, but the disease soon resumed its active state. He found most benefit from "Mudar" (*calotropia gigantica*). He would recommend perfect isolation of the sick, separation of the sexes, and removal of the children.

Dr. Beaven Rake observes that in commencing an inquiry into the spread of leprosy we have to keep in view four chief possible means of propagation, viz., (1) contagion, (2) inoculation, (3) heredity, and (4) transmission through an intermediate host. He makes remarks under each of these heads. The case of Father Damien is not conclusive as regards contagion, for he lived in a leper colony for many years, and may have absorbed the virus in many other ways, food, water, air, etc. The Dominican Nuns have been in daily contact with the lepers at the Trinidad Asylum since 1868, but no Sister or other attendant has yet developed the disease. He recognises the importance of Dr. Hawtrey Benson's case, which presents strong testimony in favour of contagion. Such instances are more valuable than supposed cases reported from the tropics. In Trinidad Dr. Rake has met with no evidence of contagion. The value of Keanu's case as proving inoculation is lessened by the discovery of lepers in his family. As previously pointed out, such an experiment, to be perfect, should be performed in a country free from leprosy on an individual who has never left that country. He alludes to the various negative experiments on men and animals. With regard to heredity, members of the same family living under similar conditions may derive the disease from the same source without its being transmitted from one to the other. If hereditary, it must be to a very limited extent, as shown by evidence from the Sandwich Islands and from the Norwegian settlements in the United States. There is at present no direct evidence supporting the theory of transmission through an intermediate host. Such a theory might explain the alleged rapid increase of leprosy in Hawaii and New Caledonia, the bacilli thrown off from affected subjects, producing countless spores, which may develop in water, soil, or the body of some other animal. Cultivation experiments and examination of food, earth, &c., have given negative results as yet. The statement that leprosy appeared amongst the Indians of Brazil, subsequently to their contact with foreigners, is important. Though this may be claimed as an argument for contagion, it may be explained by the foreigner setting up local growths of spores outside the body. At present next to nothing is known of the way leprosy is propagated; our hope of progress lies in a closer study of the leprosy bacillus, both within and without the human body, coupled with observations on the progress of the disease when introduced into countries hitherto free from it.

Surgeon-General Francis considers that the leprous neoplasm is due to deranged nerve-function, and that the cause of the derangement is probably non-integrity of the blood, as with improved habits of life the disease has been known to disappear, *e.g.*, in England, etc. He would recommend analysis of the fluids of the body for this presumed defect in the blood. The presumption that diet is to blame, is strengthened by the fact that pellagra and other disorders are connected with food. He thinks that the putrid fish-view should be thoroughly investigated, although, fish is not an ordinary article of diet in the Hills of India, it is available. A particular kind of *dâl* has been supposed to cause "something like leprosy." He considers that the disease can be propagated by intermarriage and heredity, and vaccination and inoculation, but is sceptical as to mere contact being the cause. The immunity of Europeans in India from the disease is probably due to their not being, like the natives, almost exclusively vegetable-feeders.

Dr. van der Straaten has known the treatment by Chaulmoogra oil very beneficial in several cases in Ceylon, where there is a general idea that the disease is caused by the poor being obliged to eat putrid and other fish. He thinks the segregation of all lepers would be a boon to the colony.

Surgeon-Major Pringle considers that now that lepers are not "put away" as formerly, in India, there is great danger of the females propagating the disease by prostitution. Some of the present asylums should be closed, as being little better than "leper-nurseries."

Dr. Radcliffe Crocker thinks that the investigation of leprosy would be most efficiently conducted on three lines of enquiry—etiological and clinical, pathological, and treatment—and that subdivision of labour is essential with skilled clinical observers and modern pathologists. He points out the importance of investigating individual cases, and that nothing in the history, circumstances, and general surroundings of the cases should be considered too trivial to record. He observes that a good clinical picture of leprotic phthisis is still wanting. In testing remedies, external applications should be tried on one side only, and internal means should not be simultaneously employed.

Mr. Jonathan Hutchinson contributes an article, "Memoranda for future Investigations as to the Cause of Leprosy," written from the point of view of a believer in the fish-theory. He points out the difficulties of diagnosis of the disease, and that in dealing with the statements of travellers, missionaries, etc., a large margin must be allowed for possible error. With reference to contagion, he believes that most of the facts and opinions hitherto recorded in support of the belief in contagion are more easily explained on the food hypothesis. Facts which oppose the contagion view are:—(1) A certain number of lepers arrive every year in England, etc., from abroad, yet the disease never spreads in these countries, although no isolation precautions have been taken. (2) Europeans who become affected in leprous districts will almost invariably say that they have never seen a leper.

(3) The officers of leper hospitals, surgeons, nurses, and students hardly ever become the subjects of the disease. In reference to the heredity of leprosy, he shows that many fallacies underlie the supposed facts. The fish hypothesis: fish may be the cause of the disease, in one of several ways, by the direct introduction of the bacillus into the stomach, or it may be that some element in fish-food rouses into activity a bacillus already existing in the tissues. The first is more probable, and it is obvious that even a single fragment of fish, if containing the bacillus, may produce the disease. In all ages and in almost every affected country fish-diet has more or less come under suspicion. No other article of food can be mentioned which is in use in all leprosy districts. Most of the places where leprosy is largely prevalent are on the sea-coast; and almost all large fish-curing localities are the homes of leprosy: it is also often met with in countries to which the fish is most freely exported. In the inquiry, it is desirable to record all facts relating to the fish-supply of the district—its abundance, sea or fresh water, the kinds, including shell-fish, eaten, if salted, whence procured, and by what classes eaten, if eaten preserved or raw, etc. It is very desirable to examine the fish microscopically for bacilli. Caution must be exercised in recording the denial of lepers that they have eaten fish. The bare statement that leprosy prevails in classes who, from religious scruples, never eat animal food, is usually of no real value. No facts from temperate regions, where leprosy prevails, will discredit the fish-theory. The use of fish-food is in such places general, and many communities which suffer most, observe the Catholic fasts. In India alone are many facts obtainable which may seriously conflict with the hypothesis, but such evidence must be carefully sifted; the facts from India in the main support the first theory. Evidence as to the introduction of leprosy in certain localities must be examined with care and some incredulity. It was probably indigenous in many places supposed exempt. That Chinese immigration introduces leprosy in certain places is acknowledged; but they do not carry it into places far inland. Where they go they become food caterers, and may introduce novelties, especially in reference to shell-fish and fish. Certain purposes may be served by leper-houses, (1) providing a home, treatment, etc., for sufferers, and in this they are of unmixed good; (2) for preventing marriage and transmission of disease to the children; (3) for prevention of contagion. No one who knows the facts can possibly believe that contagion is now or ever has been the main influence in spreading leprosy. Believing it to be induced by food, the idea of exterminating it by isolation is an absurdity. The segregation of lepers never has been more than a half-measure, and could never be rigidly enforced. This is so even at Molokai, where the attempt has been energetically made.

ARTICLE 818.

THE PHYSIOLOGICAL ACTION OF HYDROLYTIC FERMENTS.*

THE following ferments were examined as to their effects when injected subcutaneously into animals; viz., pepsin, chymosin (rennet-ferment), invertin, diastase, emulsin, and myrosin. Various substances raise the temperature in animals 2° or 3° C. Zuntz and Aronson found hay-infusion a useful means of doing this. Some French experimentors use sterilized cultures of the bacillus pyocyaneus for the same purpose. Senator found that the glycerine extract of fresh pus was efficient. In all these cases, the effect was due to tissue-products of micro-organisms. The unformed ferments must in part be put in the same category, and Bergmann and Angerer have already shown that pancreatin and pepsin can raise the temperature. Roussy obtained from old and turbid beer a body which he called pyrétogenine, from its power of raising temperature; invertin was found of only slight effect.

All six ferments above mentioned were found to be toxic: with pepsin, invertin or diastase, a dose of 0·05 gramme could be given without causing the death of the animal (rabbit), but 0·1 gramme caused death in two or three days. With emulsin or myrosin a dose of even 0·05 gramme was certainly fatal in two or four days, half this quantity caused death in ten days. Of chymosin an enormous dose was required to cause death, viz., two grammes for an ordinary rabbit. The rise of temperature was generally about 2°C.; it began one and a half hours after injection, and reached its maximum in four or six hours, where it remained sometimes for days with slight remissions, but it often sank below normal the day before death.

The physiological mechanism of rise of temperature.—Careful experiments with Richet's calorimeter were made to examine closely the relations between heat-production and heat-loss.* The period of rise, the stationary period, and the period of fall of temperature were each examined. As to the period of rise, the heat given off was less than normal in most of the experiments. It became evident that the rise of temperature could not possibly be exclusively due to either increased heat-production, or lessened heat-loss, but the constant which resulted was the difference between these two factors, and the rise of temperature is dependent upon it. As to the period of the height of the fever, it was found that after the temperature reached a certain height, the heat-loss was increased (and the heat-production correspondingly) in rabbits a full third, in dogs and cats somewhat less. A steady maintenance of fever temperature at a fixed level is in reality rare; it occurred in one experiment. At the end of the fever the heat-loss was even greater than during its height, whether the decline of fever was spontaneous or due to anti-pyretics. This heat-loss was increased by one-half to two-thirds the normal. The heat-production was less than in the first stage, but still greater than normal. Here, again, the absolute increase of heat-loss must not be regarded, but its relative increase as compared with the heat-production (the two values are now in an opposite relation from that of the time of rise of temperature); the difference between the two is the important point.

The causes of the altered heat regulation.—A rabbit in the stage of rise of temperature remains huddled together, with the ear-vessels contracted; and a dog also, if left alone, sits quiet, with trembling hind-legs, as if in a rigor. These are signs of lessened output of heat and its involuntary increased production in an animal whose "heart-regulation," owing to some injury, is arranged for a higher level of temperature than the actual temperature. Hence the organism feels itself too cool, and effects a correction, mostly involuntary, of this. There is not simply altered heat-loss, nor altered heat-production, but alteration of the difference between them. The connecting point of both mechanisms must lie in the central apparatus. To unravel this further, an animal was placed in a hot chamber, and the temperature was noted at which counter-regulation set in—in the rabbit shown by erected ears, with their vessels distended to the utmost, avoidance of movement, and, finally, superficial respiration, the animal lying flat with the legs stretched out. Again, the animal was placed in an artificially cold place, and the temperature was noted at which the animal began to prevent further cooling—limbs drawn up to the body, ear-vessels contracted, shivering, &c. In a normal rabbit (39·2° C.) the upper temperature was 39·6°, the lower 39·1°. But if the experiment was repeated with a feverish animal (40·9°), the upper temperature was 41·6°, the lower, 40·5°. Hence it is clear that the feverish animal is "regulated" for the temperature, which it actually has at the time. The converse occurs when the temperature of the animal is lowered by an antipyretic, *e.g.*, kairin. The ferment-fever is apparently due to toxines formed in the body.

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* By Dr. HERMANN HILDEBRANDT. "Arch. für path. Anat. u. Physiol" (Kichnr.), Bd. 121, H. 1, 1890.

* *Archives de physiologie normale et pathol.*, 1885, 2e semestre, p. 247; also, *Archiv. für path. Anat. u. Physiol.* Bd. 115, s. 34.

The pathological alterations induced.—(We omit the *symptoms* of fever in animals.) Hæmorrhages were found in the mucous and serous membranes (chiefly in stomach and intestines), and sometimes in the lungs, fasciæ, kidneys, and brain. Renal stasis was marked, and the microscope showed the vessels filled with masses of red corpuscles. Indigo-carmine left the limiting layer unstained, hence the above appearance was due to thromboses. The epithelium was cloudy —in one case fatty. As regards the blood-pressure, it was found that alterations of this are not to be regarded as characteristic of fever.

The action of ferments as affected by the organism.—Chymosin (rennet) is peculiar in being of little potency, apparently because of its dilution in the blood and the effect of temperature upon it. The fever induced by a ferment appears to be a "protective measure," the temperature of the body being regulated for a higher degree than the normal, so as better to conquer the intruded enemy. (All ferments are marked by high temperatures). This regulation has already been surmised in infectious diseases. Animals placed in warm chambers (36° or 40°) till their temperature became feverish, were wholly or partially protected against the action of injected ferments. The experiments showed this in an unmistakeable manner. If the doses were small enough to allow of recovery of normal dogs, the heated dogs lost far less weight than the latter would have lost. If the dose was only strong enough to kill a normal dog after some days, heated dogs escaped death altogether.

Hammarsten showed that blood-serum (especially of the horse) can prevent the coagulation of milk by rennet. Numerous experiments were made with serum upon the ferments—NaCl solutions being used as control-tests—but no difference was found between the action of serum and that of NaCl.

The hæmorrhagic diathesis induced by the ferments, and the presence of hæmoglobin in the bile showed that the red blood-corpuscles were especially injured, and robbed of their colouring matter. Solution was shown by the author to occur outside the body (a ferment being added to blood holding NaCl), and after twenty-four or forty-eight hours' action all the oxyhæmoglobin was reduced to hæmoglobin (rabbits' blood). This conversion was far more rapid if the blood was taken from an animal poisoned by a ferment. Invertin, emulsin, myrosin, and diastase were the strongest. Do the ferments rob the corpuscles of their oxygen? If so, their fermenting properties would be weakened; experiment showed this was not their case, or only inappreciably so.

It was to be expected that these ferments would alter the coagulability of the blood during life, as it is known that some animal ferments (pancreatin, pepsin, and fibrin-ferment) can cause coagulations in the vessels, and the expectation was justified. The thromboses have already been mentioned. The action was much milder than the fibrin-ferment action, myrosin alone caused—on intravenous injection—sudden and severe coagulation, and death in the rabbit, not in the dog. Blood drawn from animals poisoned by ferments coagulated much more quickly than normal blood; but ferments added to fresh-drawn normal blood delayed coagulation. Chymosin was a striking exception to this. Further experiments on rabbits showed that during injection, or soon after, the tendency to coagulation is, at first, considerably lessened; then follows a period of increased, or else normal coagulability. But dogs' blood behaved differently from rabbits, being uncoagulable after ferment-infection for some hours, then slowly coagulable, then very easily so (thrombotic period).

The Fever.—The fever begins already an hour after injection, hence development of fibrin-ferment cannot be its cause, nor can increased coagulability. Fever appears to be a reaction of the whole organism against an inimical agent; the exact mechanism is still a question. Of primary nervous effects nothing was established in warm-blooded animals, the usual symptoms are all secondary. Doses which kill the above animals have no effect on cold animals.

Destiny of ferments in the body.—The idea arises that it is not the ferments in themselves which cause fever, but substances formed by them. They may act, as they do outside the body, without being changed themselves. Some alteration goes on, for the non-coagulability of the blood is only a temporary phenomenon. Again, the body may be able to free itself from various ferments, as it can from fibrin-ferment (Al. Schmidt). According to Kuley, ferments absorbed from the intestine quickly appear unaltered in the urine (Grützner). But vegetable ferments differ from the corresponding animal sorts, they resist better the action of warmth; Paschutin says, *e.g.*, that ptyalin is weakened by two hours' exposure to a heat of 40°, whereas vegetable ptyalin requires 50°, a temperature never reached in the body. The vegetable kinds are also more slowly eliminated, to judge by the duration of the fever.

Bechamp and Baltus found that only a part of the ferment was recoverable from the urine—in one experiment only 3·5 out of 7 grammes injected into the veins—similarly for pancreatin. Possibly there is excretion from the intestine, especially as the chief pathological alterations are to be found here.

E. J. EDWARDES, M.D.

ARTICLE 819.

ON THE PHYSIOLOGY OF THE MUSCLES OF THE LARYNX.*

IN a recent number of the *Lyon Médical*, Dr. Paul Raugé discusses the normal and pathological physiology of the muscles of the larynx, as elucidated by recent observations and experiments of himself and others. He points out that physiologists of thirty years ago reduced the movements of the intrinsic muscles of the larynx to a few simple formulæ, and these have long passed current for a complete exposition of the muscular mechanism of the larynx. The scheme of the glottic movements which has long been accepted as correct, may be summarised thus:—Attached in front to the angle between the alvæ of the thyroid, whose fixation is assured by the crico-thyroid muscle, the vocal cords possess behind a moveable point of attachment in the antero-internal angle, or vocal process of the arytenoid. By the movement of this point the cords are separated (respiration), or approximated and rendered tense (phonation), as the case may be. The arytenoid may thus be likened to a bent lever, with the concavity turned forwards and outwards, executing around a vertical axis, passing through it at about its middle, a movement of horizontal rotation, or a bell-like movement. The external arm of the lever (muscular process) is worked by two sets of muscles. An anterior group (lateral crico-arytenoid, external thyro-arytenoid) which move it forward, and a posterior muscle (posterior crico-arytenoid) which draws it backwards and inwards. These movements correspond to inverse movements at the other end of the lever (vocal process), the first approximating the cords and making them tense, the second separating them and making them lax. Superadded to this rotatory movement, is one which brings the opposed surfaces of the arytenoids together, completing at the back the closure of the glottic aperture. This is affected by the arytenoid muscle. The superficial oblique fibres of this muscle, which extend up to the ary-epiglottic folds and the edge of the epiglottis, constitute a kind of sphincter of the upper orifice of the larynx. If, in addition to the preceding, we mention a muscular band enclosed in the substance of the cord itself, which gives it a kind of rigidity, and internal tension (internal thyro-arytenoid), we shall have presented all the essential elements of the classic description of the physiology of the muscles of the larynx.

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* *Lyon Médical*, Aug. 3, 1890.

There can hardly be imagined a simpler and more plausible theory of the mechanism of the glottic movements. More accurate observations, however, have shown that it requires considerable modification to render it conformable with anatomical facts, and with certain pathological conditions. The following account of the mechanism of the glottic movements, though not exhaustive, nor pretending to clear up every doubtful point, is offered by Dr. Raugé as being more in accordance with the actual facts.

The anterior extremities of the cords are fixed in the angle between the alvæ of the thyroid, and cannot at this part be separated from each other. The glottis here only undergoes a widening of the angle when the arytenoids are abducted. By contraction of the crico-thyroid muscle the cords are stretched, on condition that the posterior extremities do not yield to the traction, but are solidly fixed at the arytenoid attachment. It is just this fixation of the arytenoids, and consequent counter-extension behind, which constitutes the chief difficulty of the whole question. The question was simplified by attributing to the arytenoid cartilage a fixity which it was far from possessing, and which was readily attributed to the control of the crico-arytenoid ligaments and the articular capsule. It was supposed that the cartilage, securely fixed on its inferior articulation, was moveable only on a vertical axis, and turned on this imaginary pivot, under the action of the muscles attached to the external process. Such a notion of stability could not be entertained by any one who had examined the arytenoid on the dead body, especially after removal of the muscles. The capsule then presents such a degree of laxity, and the ligaments so little resistance, that the cartilage slips about, and sways in all directions, and unless some other force besides the passive action of the ligaments were capable of fixing it, it would be impossible to suppose that it possessed during life a position of equilibrium and regular movement. Instead of executing movements of rotation, the arytenoid would be inevitably drawn bodily forwards or backwards, by the action of the lateral crico-arytenoid and external thyro-arytenoid in the one case, or of the posterior crico-arytenoid in the other, unless these muscles, by their simultaneous contraction, furnished each other with the necessary reciprocal support. Jelenffy, of Buda-Pest, has contributed more than any one to the elucidation of this question of the fixation of the arytenoids by certain associated muscular actions. He maintained that the arytenoid does not rotate about a fixed axis, as was generally taught, but for each group of muscles there was a different axis of rotation, each group taking for *point d'appui*, and centre of rotation, the attachment of the opposed group. Thus the arytenoid possesses no fixed point, but is acted upon by three distinct forces. Two of these forces acting on the extremities of the lever, draw it forward, viz., the vocal cord and the lateral crico-arytenoid; the third force, which acts from before backwards, is the posterior crico-arytenoid. The points of application of this third force needs to be carefully determined, since upon this depends the equilibrium of the three forces. Now Jelenffy pointed out that the most important fasciculus of the posterior crico-arytenoid muscle (internal portion) is attached much more internally than the tendon of the lateral crico-arytenoid. Thus the posterior traction acts between the two points of application of the anterior traction, and equilibrium is established between the three forces and the arytenoid is fixed at the moment of phonation. As to the rotation of the cartilage, which at the commencement of phonation causes the vocal processes to approach each other, it is not due merely to the action of the lateral crico-arytenoid, but to that of the posterior crico-arytenoid also, which taking for its fixed point the insertion of the former, situated external to its own insertion, draws inwards and backwards the internal extremity (vocal process) of the cartilage. Thus the posterior crico-arytenoid becomes a constrictor of the glottis, a tension of the cords, and a muscle of phonation. This new *rôle*, however, is only to be attributed to the internal fibres of the muscle; the external portion preserves its old function of abductor of the vocal processes.

Dr. Raugé's observations were made for the purpose of testing Jelenffy's views. In order to analyse the movements of the arytenoid and the part which the muscles take in fixing this cartilage, one must be content with examination of the larynx in the cadaver. The method of direct stimulation of the muscles by the electric current, or that of dividing the nerves, can only be applied in the case of the crico-thyroid, the action of which is not in dispute. Following the example of Jelenffy, Raugé made his observations in the larynx of the ox, which is incontestibly superior to the human larynx for studying minute details. It is, moreover, an exact reproduction of the human larynx, in every part, both muscle and cartilage, and one may safely draw conclusions from one to the other. The two main points to be verified were these:—The axis of movement of the arytenoid, and the part taken by each muscle in its movements. Add to this the not less important question, how the vocal cords find in the arytenoids, devoid as they are of fixity, the *point d'appui* necessary for their proper vibrating tension.

If we examine attentively the movements of the arytenoid cartilage in the dead subject, we perceive that though the cartilage can be moved pretty freely in all directions, the most ample movement that we can communicate to the cartilage is a kind of inclination forwards, followed by a tilting backwards, which takes place in a plane almost exactly antero-posterior, very slightly inclined forwards and outwards. On removal of the capsule, one can recognize that this movement corresponds to the shape of the articular surfaces. These form a somewhat pulley-like joint, resembling the elbow joint. The muscular process, almost vertical in direction, completes behind the concave articular surface, of which the inferior facet of the arytenoid forms the horizontal portion. A sigmoid cavity, something like that on the upper end of the ulna, is thereby formed, with the concavity directed downwards and forwards, and this concavity is applied to the articular surface on the upper margin of the cricoid. This latter surface is round and convex in the antero-posterior direction, and the edges of this articular surface pass directly and insensibly into the non-articular surface at each side. It is this absence of any raised edge laterally, which gives the arytenoid that transverse mobility that enables the arytenoid muscle to bring the cartilage into close proximity with its fellow of the opposite side.

If we exert traction on the fleshy belly of the posterior crico-arytenoid muscle in the mean direction of its fibres, we notice that the arytenoid turns round an axis which is almost horizontal, though inclined slightly downwards and forwards. The cartilage seems to slide upwards and backwards over the cricoid. The internal surface, the vocal process, and the anterior edge undergo a manifest elevation, turning slightly outwards at the same time. The total effect is a powerful tension of the vocal cords, if the thyroid have been fixed at the same time, so as to imitate the the effect of contraction of the crico-thyroid muscle. It will be noticed, at the same time, that in proportion to the degree in which the anterior edge of the arytenoid is raised and turned outwards, it stretches the thyro-arytenoid muscle, especially its upper fasciculus, the fibres of which are thus raised and stretched across the edge of the cartilage, like the strings of a violin across its bridge. It is in order to correct the deviation outwards of the vocal process that the lateral crico-arytenoid intervenes, maintaining thus its traditional *rôle* of adductor. At the same time the external thyro-arytenoid, pressing on the edges of the arytenoid as above described, contributes apparently to depress the vocal process and restore to the cords their horizontal position. Raugé lays particular stress, however, on the preponderating *rôle* of the posterior crico-arytenoid in fixing the vocal cords in phonation, being fully in accord with Jelenffy on this point. The principal function, indeed, of this muscle is to keep the arytenoid from being drawn forward, not only by the antagonistic muscles, but by the weight and elasticity of the parts. From this point of view the posterior crico-arytenoid is entitled to rank as one of the muscles of phonation. Jelenffy attributes to it also the *rôle* of an adductor of the cords, but Raugé could not satisfy himself that such is the case, neither by bringing into action one or other portion of the muscle alone, nor by combining the action of any portion with the other muscles. It must rather be considered an abductor of the cords, but far from this being the sole or principal function of the muscle, as physiologists formerly taught, it is quite secondary to its phonatory function.

The respiratory function of the larynx does not require very active muscular intervention. The patency of the glottis, necessary for the entrance of air, is, indeed, an essentially passive state. It is only in forced inspiration that its dilatation requires the intervention of muscular force. The position assumed by the cords in tranquil respiration is a position of repose. To bring them into the state of tension and adduction necessary for phonation requires energetic muscular action, while to bring them from the position of rest to one of relatively greater abduction (forced inspiration) is but a small task, and this constitutes the respiratory function of the posterior crico-arytenoids.

Absolute paralysis of the dilators of the glottis, their complete functional suppression (degeneration or section of the recurrents) does not, therefore, prevent separation of the cords as far as the so-called cadaveric position, an opening more than sufficient for respiration under normal conditions. A lesion of this kind, so long as it is uncomplicated, does not interfere with respiration; when asphyxia supervenes, it is because an opposite condition has been added on, viz., contraction of the adductors; more often, however, there has been a primary spasm of the adductors, which has been mistaken for paralysis of the abduction. Since Gerhardt's description it has been the custom to class together, under the title of abductor paralysis, all cases characterised by a permanent adduction of the vocal cords to the middle line. Most laryngologists accept the views of Rosenbach and Semon, that all lesions of the recurrents, characterised by abnormal and persistent adduction of the vocal cords, are due to lesion of the fibres supplying the posterior crico-arytenoid muscle alone. Krause and Jelenffy, however, explain most of these cases by supposing contracture of the constrictors of the glottis (Krause), that is, of all the muscles of the larynx (Jelenffy). Raugé, also, supports this view.

The fact that this muscle co-operates in producing phonatory tension makes it clear *a priori* that its complete paralysis is incompatible with perfect preservation of the voice. Now, in many of the cases above mentioned, the voice is spoken of as being unaffected. Jelenffy, however, contends that its integrity is only relative; it suffices for low notes and ordinary speech, but high notes requiring energetic tension cannot be produced. There is, moreover, a valuable subjective sign which establishes existence of paralysis of the posterior crico-arytenoid. It is this: the arytenoid cartilage is inclined forwards, on to the vocal cord, the antero-posterior dimensions of which seem in consequence to be shortened.

Anatomy and Physiology.

RECENT PAPERS.

820. Sehrwald, Dr.—On the Action of hot dry Air on the temperature of the Lung. (*Deut. med. Wochenschrift*, No. 15, 1890.)

821. Kravkoff, Dr. A. P.—On the Assimilation of Fats under the Influence of Tepid Baths in Healthy Persons. A Preliminary Note. (*Vratch*, No. 36, 1890, p. 816.)

ART. 820. *Sehrwald on the Action of hot dry Air on the temperature of the Lung.*—Hot dry air, 50° to 350° C., inhaled by the nose, raises the temperature of the lung by 1° at the most, even if the inhalation be continued for an hour and a half. Almost as great a rise is obtained by the simple inhalation of ordinary fresh air, provided this is active and rapid. The inhalation of hot air by the nose does render the respiration more active and rapid; one may, therefore, attribute the elevation of the temperature of the lung to this cause. This is all the more probable, since the hot air as soon as it reaches the large bronchi is already cooled down to a temperature below that of the rectum. The mucous membrane of the trachea is much more sensitive to the action of hot air than that of the mouth and nose. If hot air is made to penetrate directly into the trachea, tolerance is exhausted as soon as the temperature of the air surpasses 80° C. As a consequence of the admission of air at 80° directly into the trachea, the movements of respiration are increased to 144, or more, in the minute. During this time the temperature of the lung is not raised even by 1°. The opinion of Halter that it is sufficient to expose the tubercle bacillus at close intervals of time and for a relatively short period to a temperature of 41° C., to destroy them, or at least to diminish their virulence, is not proven. If this were so, the destruction of the bacilli, or the lessening of their virulence, could only be obtained by the heating of the pulmonary parenchyma itself. But Sehrwald's researches show that a notable elevation of the pulmonary tissue is neither obtained by inhalations of hot air, nor by the direct penetration of heated air into the trachea.

G. D'ARCY ADAMS, M.D.

821. *Kravkoff on the Assimilation of Fats under the Influence of Tepid Baths in Healthy Persons.*—Following the suggestion by Prof. I. T. Tchüdnovsky, Dr. A. P. Kravkoff, of St. Petersburg, has carried out five experiments on as many healthy young men (military *feldshers*, or medical assistants), his object being to elucidate the influence of tepid baths (at 35° C.) of half-hour duration on the assimilation of fatty constituents of food. In each instance the observations lasted twelve days, being subdivided into three equally long periods, during the second of which the person was taking one or two baths daily, all other conditions remaining equal from the beginning to the end of the experiment. The dietary consisted of milk, best butter, fatless meat, bread, salted cucumbers, tea with sugar, and drinking water. The proportion of fats (fatty acids) in stools was determined after Prof. P. A. Latchinoff's method. The research has proved that (1) the baths invariably improve the assimilation of fats, the surplus oscillating between 0·555 and 1·049 per cent. [For instance, in the præ-bath period the subject was assimilating 94·972 per cent. of fats ingested; in the bath period, 95·975; and in the after-period, 96·021.] (2) They distinctly increase the bodily weight, the total gain (as measured in the after-period) varying from 424 to 1,782 grammes. VALERIUS IDELSON, M.D.

Surgery.

RECENT PAPERS.

822. BROWN, DR. T.—On a Case of Severe Hæmaturia; Nephrectomy; Recovery. (*N.Y. Med. Rec.*, Aug. 16, 1890.)

823. CAIRD, MR.—On the Treatment of Cold Abscess. (*Edin. Med. Jour.*, September, 1890.)

ART. 822. *Brown on a Case of Severe Hæmaturia; Nephrectomy; Recovery.*—The author gives the full notes of this interesting case. The operation was performed by Dr. McBurney. The patient was a woman, aged twenty-six, who had been five years married, with three children; family history was markedly gouty. Health previous to the first attack of hæmaturia had been good, except for two periods of marked and somewhat critical anæmia. The symptoms commenced when the second child was four months old, and were referred to the right kidney. There was sudden and marked hæmaturia pain in the right renal region, radiating to the distribution of the anterior crural veins below Poupart's ligament; fever reaching 104° F. The acute pain and hæmorrhage disappeared rather suddenly at the end of five days. A second attack supervened some months afterwards, following a strain, and a stiff catheter had to be used in order to thrust the large clots of blood aside before micturition became possible. Upon this occasion the diagnosis of renal calculus was made, and under treatment the symptoms again rather suddenly subsided. The third attack developed about fourteen months later, when all the symptoms were much more severe, the pain being continuous. Physical examination of the suspected region showed tenderness on pressure between the twelfth rib and the crest of the ilium. Antero-posterior palpation with one hand compressing this region, and a little lower, was equally sensitive. No swelling was appreciable. Vaginal examination was negative. The diagnosis was again arrived at that the case was one of renal calculus. No improvement taking place in the symptoms it was decided to operate, nephrotomy being suggested. But, at the operation, despite careful examination, no calculus was found. It was then determined to remove the kidney, as affording the only means of checking the persistent hæmorrhage. This procedure was successfully carried out, and the wound was closed with deep and superficial sutures, a large drainage-tube being introduced at each extremity of the wound. An antiseptic dressing was applied, although scarcely any blood had been lost during the operation. The patient was markedly collapsed as its close, and required hypodermic injections of ether, etc. Complete recovery ultimately ensued. On examination of the enucleated organ, there was found chronic pyelitis with the production of new tissue. The original cause of the hæmorrhagic pyelitis was held to be doubtless a calculus which had, probably, escaped among the large and numerous blood-clots which had, from time to time, been passed. The whole history, however, of the case points to the fact that a chronic condition had long been established, which was in itself capable of giving rise to fatal hæmorrhage, although the probable primary cause—viz., calculus—had disappeared.

823. *Caird on the Treatment of Cold Abscess.*—The author describes his method of treatment of cold abscess as follows:—The patient having been chloroformed and the skin shaved, and carefully purified with carbolic lotion (1 in 20), the abscess is opened by a small incision, into which the finger is at once passed. The whole of the wall which is accessible, is now scraped bare with the finger-nail. It is easy to feel the pyogenic membrane peeling off in large flakes and shreds, and the finger readily recognises where a perfectly raw surface is left. If the entire extent of

the wall is not accessible, a second incision is made; the first opening is plugged, and from the second aperture the remainder of the cavity is now scraped well. It is advisable not to allow any pus to escape, since one can more easily strip off the lining membrane and judge of the thoroughness of the scraping when the abscess is distended. With the finger-nail the granulation tissue may be scraped away with impunity from off important structures, and the finger-pulp tells exactly how much is being done, and how much has to be done, in this respect differing widely from the sharp spoon, which cannot be used with the same freedom or accuracy. The pus is now allowed to escape, and the cavity is thoroughly washed out with boiled boracic lotion, warm, until the fluid streams away clear and transparent. Very short tubes may now be inserted, if need be, and a couple of sutures should be put in the wound, but not tightened up. The dressing consists of a large mass of moist guaze wrung out of carbolic lotion, and over that a large corrosive wool mass, secured in position by carefully applied bandages of Douret. Over all a piece of elastic webbing is carried, and the patient kept absolutely quiet in bed by means of suitable splints. On the following day the tubes may be removed, and the stitches tightened up. Future dressings are determined by the rules common to antiseptic surgery. Appended to the paper are the records of four cases, in which the method above described was put in practice.

Medicine.

RECENT PAPERS.

824. Acosta, Dr.—On the Treatment of Rabies in Cuba.

825. Gramatchikoff, Dr. Alexandr I.—On the Influence of Fever on Mineral Metabolism in Man. (*St. Petersburg Inaugural Dissertation*, 1890, No. 49, p. 82, with six tables.)

826. Oliver, Dr. Chas.—On Ocular Symptoms observed in so-called General Paresis. (*Transact. Amer. Ophthalmological Society*, 1890.)

827. Maddox, Dr.—On a Case of Spontaneous Gangrene in a Child. (*New York Medical Record*, Sept. 27, 1890.)

828. Ashton, Dr.—On a Case of Splenic Disease. (*New York Medical Record*, Sept. 20, 1890.)

Art. 824. *Acosta on the Treatment of Rabies.*—At the meeting of the Medical Congress of Cuba, held at Havana, Dr. Acosta gave the result of his trials of Pasteur's treatment of rabies. Convinced of its value, he commenced the preventive treatment on the 8th of May, 1887, and from that date to the 31st December, 1889, he had inoculated 306 persons, of whom five had died. Comparing this mortality, 1·63 per cent., with the statistics furnished by Pasteur, who had a death-rate of 1·82, those of St. Petersburg 2·68, Odessa 1·41, Warsaw 2·7, Milan 0.60, Naples 1·50, we find a satisfactory proportion in favour of Dr. Acosta. Before Pasteur commenced his vaccinations the general mortality of those bitten by mad dogs was 20 per cent., according to Vulpian; and 14 per cent. according to Dieulafoy, and 15 per cent. in the department of the Seine. During the period specified by Dr. Acosta, there had died, in different parts of the island, eight people who had received no treatment. If such a mortality had been amongst those treated in the preventive method, these eight deaths would correspond to 2,440 persons bitten. Dr. Cuervo asked if all the individuals submitted to treatment had been really bitten by mad animals? Dr. Cacho, of Trinidad, cited four persons bitten by one mad dog, of whom two died. These received no treatment, the other two who were inoculated in the laboratory survived. Dr. Acosta said that all the cases inoculated by him had been bitten by mad dogs. This had been ascertained by experiment and examination of the symptoms. Respecting the mortality on the island before Pasteur's treatment was introduced, he was not able to give trustworthy statistics. In conclusion the Congress sent a telegram to M. Pasteur to congratulate the illustrious *savant* on the happy results of his treatment in Cuba. William W. Ireland, M.D.

825. *Gramatchikoff on the Influence of Fever on Mineral Metabolism.*—Dr. Alexandr I. Gramatchikoff, house physician to Prof. V. A. Manassein's clinic, contributes a very valuable monograph on this yet little known subject, embodying his own elaborate experimental researches of one-and-a-half year's duration. Six patients, young men, aged from seventeen to twenty-three, were selected for the purpose, four of them suffering from enteric fever, one from croupous pneumonia, and one from acute pulmonary tuberculosis. In the former five cases the metabolism was studied both during febrile and non-febrile state. The following are the essential corollaries drawn from the investigations:—(1) The metamorphosis of potassic and sodic salts is increased during fever, and that very considerably. The metabolism of potassium rises to a higher level than that of sodium [*e.g.*, in a patient during fever (38·7°C.), the metabolism of chloride of potassium was as high as 218·68 per cent., and that of chloride of sodium 152·76 per cent., while during a non-febrile period, in the same subject, the respective figures were 76·67 and 92·11]. (2) The metamorphosis of lime and magnesia salts similarly increases, but to a good deal lesser extent, comparatively with the alkaline elements [*e.g.*, in a case during fever, the metabolism of CaO amounted to 31·04 per cent., and that of MgO to 70·91; in a non-febrile period, in the same subject, the respective figures were 21·12 and 45·18]. (3) The metamorphosis of sulphur (SO_3) rises invariably very markedly. (4) The same holds true in regards to phosphorus (P_2O_5.) (5) The metabolism of such mineral elements which possess a relatively small atomic weight and a strong chemical affinity (K,Na) is intensified by fever in a by far larger degree than that of such elements which have a higher atomic weight and a less powerful affinity (Ca,Mg). (6) A mineral metabolism oscillates strictly parallelly with a nitrogenous one, which is similarly augmented by fever. (7) As Prof. V. A. Manassein (*vide* Virchow's *Archiv.* 1872, vol. lvi., p. 220) and Dr. Zuelzer (*Beitræge fuer Medic. Stat.*, 1878, No. 3, p. 154) have shown, the most intense mineral and nitrogenous metabolism takes place in soft systemic tissues (muscles, glands) and blood, while osseous tissue plays a but insignificant part in the process. (8) The higher is a febrile temperature, the more intense becomes disintegration of tissues containing the said mineral ingredients.

Valerius Idelson, M.D.

826. *Oliver on Ocular Symptoms observed in so-called General Paresis.*—Dr. Oliver made observations on the ocular symptoms in twenty well-marked cases of

general paralysis of the insane, seen at the State Hospital for the insane at Norristown, Pennsylvania, in private practice, and in some private asylums. The study was limited to subjects in the so-called second stage of the disease, and care was taken that each subject was seemingly free from any extraneous disease, or local disorder. The subjects were all of the male sex. The average age was forty years. The following is a summary of the symptoms observed:—(1) The sensory changes were limited to unequal optic-nerve degeneration, decrease of retinal circulation, with subnormal direct and eccentric vision for both form and colour, and distinctly show lowered sensory-nerve response. (2) The motor symptoms consisted in unequal and feeble movement of the irides, causing inequality and irregularity of pupillary areas, a peculiar form of ataxic nystagmus, a slight loss of ciliary tone, and all express want of proper muscle action—true paresis. (3) The peculiarly local conditions shown in the fundus, such as the pigment-massings, the crescents of absorption, the disturbed and granular condition of the choroid, etc., all indicate wear and tear of an abused and irritated organ.

J. B. Ball, M.D.

827. *Maddox on a Case of Spontaneous Gangrene in a Child.*—The patient was a child between five and six years of age, who was brought for the purpose of obtaining advice respecting "a black spot on his foot." Examination revealed a dark-coloured patch, about the size of a shilling, over the metatarsal joint of the great toe. The child had always been healthy, and no history of injury could be elicited. As a topical application a weak solution of carbolic acid was ordered, and the foot enveloped in cotton batting. The patient living at a distance of several miles, the father was requested to report the progress of the case to the doctor in a day or two. At the end of two days he called and reported that the child was comfortable, and that the gangrene had spread but very little. By October 23rd, however, the patient was seen at his home, and the disease was found to have spread considerably. In other respects the child appeared to be in good condition. On October 25th, six days from the date of Dr. Maddox's first inspection of the foot, he again went to visit the patient, but found the entire family grouped about the bed on which lay the little patient in the death-agony. On looking at the diseased foot he found it black and shrivelled clear up to the ankle-joint. He learned that the child had, while sitting on the floor playing, an hour before, fainted, but soon revived and resumed his play. A few minutes before his arrival the child again fell back unconscious, and died soon after. All the authorities agree that spontaneous gangrene is of extremely rare occurrence under the age of ten years, but possibly, if all the cases that do occur in children could be collected, statistics would scarcely warrant us in making such free use of the term *senile* as we are accustomed to make in the consideration of dry gangrene.

828. *Ashton on a Case of Splenic Disease.*—Dr. Ashton contributes notes of an obscure and interesting case occurring in a little girl, aged five years, in whom febrile symptoms and gastro intestinal irritation was followed by convulsions. Three weeks thereafter, on August 15th, an eruption, similar to that in measles, yet wanting the other symptoms of the latter disease, appeared over the whole body. This continued only a few days, and was of so mild a character as not to interfere materially with her childish sports; the skin, however, retaining a slight icteroid hue. On August 17th the patient was suffering from distressing pains over the whole body, and stiffness of the joints, so marked that it was well-nigh impossible for her to move the limbs on the left side The temperature was 104·6 F., pulse 140. On August 18th the crisis occurred, with profuse perspiration and a subsidence of all the acute symptoms. For ten hours thereafter the patient rested quite comfortably, complaining chiefly of pain in the bowels. About noon a dark, congested spot, measuring 3 inches by 3, was noticed above the wing of the left ilium, overlying the spleen. For several hours the spot was not observed to increase in size, but during that night it spread rapidly. By the following day the discolouration extended antero-posteriorly, from the median line of the rectus muscle to the vertebral column, and from the junction of the middle and upper third of the thigh to a line corresponding to the lower border of the fifth rib. There was also a number of small, livid spots on the lower extremities. There were none on the right side until just before death, when a purple spot or stain appeared over the right ilium, 3 by 4 inches in extent. Respiration then became hurried, pulse very frequent and feeble, extremities cold, extreme thirst and jactitation, followed by death, which occurred at two p.m. Throughout the whole sickness—it is worthy of note—there seemed to be no impairment of the intellectual faculties. Autopsy, twenty-four hours after death: rigor mortis well marked. The area of discolouration had not increased, but the colour, which before death was a dark plum or purple, had faded to a bright red. The adipose tissue underlying the dark patches was infiltrated, presenting the appearance of complete stasis of blood in the cellular tissue. The spleen was soft and completely disorganised, and enlarged to twice its usual size. All the other organs in the abdominal cavity were normal. The author asks for suggestions as to the cause and mode of death in this case, which he regards as somewhat unique.

Pharmacology and Therapeutics.

RECENT PAPERS.

829. Wallace, Mr. David. —On Motor Paralysis following Injections of Ether. (*Edinburgh Medical Journal*, September, 1890.)

830. Thomson, Mr.—On The Therapeutic Value of Exalgine, etc. (*Prov. Med. Jour.*, Sept., 1890.)

831. Richardson, Dr.—On the Carbolic Ether Spray. (*The Asclepiad*, Aug., 1890.)

832. Naegely, Dr.—On a Method of Arresting the Paroxysms of Whooping Cough, and of Relieving Neuralgia of the Fifth Nerve. (*La Semaine Médicale*, September 3, 1890.)

833. Seluek, Dr. I.—On the Effects of Brown-Séquard's Extract in Hemiplegia. (*Rüsskaia Medit-zina*, No. 28, 1890, p. 441.)

834. Lanfenauer, Dr.—On Bromide of Rubidium and Ammonium in Epilepsy. (*Lyon Médical*, No. 28, 1890.)

835. Chabannes, Dr. René.—On the Treatment of Dyspnœa by Inhalations of Carbonic Acid. (*Lyon Médical*, 1890, No. 28.)

836. Rosenbach (Prof.) and Pohl.—On the Antagonism between Iodine and Salicylates as regards Exudations and Transudations (*Berliner klin. Wochenschr.*, No. 36, 1890.)

837. Kuehn, Dr. Julius.—On Mollin, a new Ointment-base. (*Ibid.*)

838. Lailler, M.—On Indian Hemp. (*Annales Med. Psychol.* No. 1, 1890.)

839. Hudson, Dr.—On Veratrum Viride and Morphine in Tonsillitis. (*N.Y. Medical Record*, Sept. 27, 1890.)

Art. 829. *Wallace on Motor Paralysis following Injections of Ether.*—The employment of subcutaneous or intramuscular injections of ether in cases of collapse requiring the immediate exhibition of diffusible stimulants, is a practice which is familiar, by more or less frequent experience, to every surgeon; and usually it is regarded as a safe and reliable expedient, under the circumstances that call for it. It is, however, not altogether free from danger, as is demonstrated in an article from the pen of Mr. David Wallace, contained in the September issue of the *Edinburgh Medical Journal*, wherein two cases of injury resulting from the procedure are narrated. In each instance the substance used was sulphuric ether to the amount of twenty-five minims; and in both, the injection having been made in the fore-arm, paralysis of all the muscles supplied by the posterior interosseous nerve ensued, and proved to be most difficult of ultimate cure. The writer points out that the possibility of such an accident is passed over entirely without mention in all the modern treatises on medicine; and, as a result of his researches, he has only been able to find a single reference to the subject, viz., by Dr. Arnozan, in the *Journal de Médecine de Bordeaux*, who had as far back as 1881 noticed the phenomenon which Mr. Wallace describes. The conclusions of the latter agree likewise with those of the former observer in respect both to prognosis and treatment in these cases; the one being favourable, though recovery may be a long time delayed; and the other being best secured by galvanism, which hastens the cure in a very marked fashion. The causation of the paralysis is explained by the action of the ether in coagulating and destroying the constituents, and so interfering with the conductivity, of the nerve-fibres with which it comes into contact when diffused from the point at which it is introduced. Inasmuch as the worst effects seem to follow from the deep injection into muscular tissue, it is advised that a fold of skin should always be carefully pinched up, and the liquid thrown into the subcutaneous structures only. Or, if it is deemed requisite to inject into a muscle, to select a fleshy muscle, such as the deltoid or gluteus maximus, and thus minimise the risk of injury to nerve-fibres.

C. H. Wade, M.D.

830. *Thomson on the Therapeutic Value of Exalgine, etc.*—Dr. Thomson writes a short article on the value of some of the new remedies that are so much used for the cure of neuralgia and other nerve-disorders. The last drug the author has tried is exalgine, and he gives it in doses of one or two grains three times a day. He finds it very useful in cases of lumbago and sciatica, and in cases where quinine has been pushed without success, he has found a few doses of exalgine give great relief. Some two years ago Mr. Thomson used antipyrin very extensively, but now he seldom uses it, as other drugs act quite as well, and they are not so expensive. The author, however, at present likes antifebrine better than any drug he has prescribed. In the late influenza epidemic he gave it in every case where frontal headache and lumbago were prominent symptoms; the dose he gave was three or four grains every four hours. In neuralgias of the head it gives speedy relief; in fact in nearly every case where pain is a prominent symptom, this drug gives relief. When one suspects a patient to have a weak or fatty heart, it is as well to give phenacetine instead of antifebrine. In seven or eight grain doses every four hours, it is a safe and effectual remedy in all neuralgias, whether of the head, back, or any other part of the body.

831. *Richardson on the Carbolic Ether Spray.*—Dr. Richardson states that carbolic acid in ether, in the proportion of five grains of the acid in five fluid ounces of anhydrous ether, yields a good anæsthetic spray, possessing the following advantages:—(1) The superficial anæsthesia produced appears before the skin becomes hardened from the cold, whereby, in cutting operations, the knife is less impeded than it usually is when there is dense freezing of cuticle. (2) If deep cutting be necessary, a continuance of the anæsthetic spray on the divided part causes very profound anæsthesia, so that the dissection of the part can be carried on without pain. (3) The anæsthesia produced is prolonged, and pain from reaction, which sometimes occurs after mere freezing, is reduced or prevented. There is, however, a great disadvantage in using this spray, as it sometimes leaves a wound that does not readily heal, but remains irritable for several days, and heals by granulation, leaving a very ugly scar; again, if the wound be large enough, carbolic acid may be absorbed to cause carbolic poisoning. Dr. Richardson strongly recommends the use of this spray in cases of ulcerating cancer, where there is considerable pain, and an offensive discharge

Richard Neale, M.D.

832. *Naegely on a Method of Arresting the Paroxysms of Whooping Cough, and of Relieving Neuralgia of the Fifth Nerve.*—This method consists in elevating the hyoid-bone and larynx, and in maintaining them in this position for a minute or a minute and a half. The operator places himself in front of the patient, and with his thumbs pushes upwards the greater cornua of the hyoid bone, a purchase being obtained by resting the index-fingers on the patients' ears, the other fingers being placed upon the neck. Naegely, finding that this procedure relieved the paroxysms of whooping cough, next applied it, with equal success, to various nervous conditions; neuralgia of the fifth nerve, migraine, globus hystericus, nausea of nervous origin, etc. According to him, a single application of the method frequently suffices to remove the pain completely; but in some cases the proceeding must be repeated several times. The number of patients thus treated successfully is over fifty. As to the scientific explanation of the result obtained, nothing definite is known. It doubtless depends on one of those phenomena of inhibition so well studied by Brown-Séquard, but the exact mechanism remains to be determined.

W. A. FitzGerald, MD.

833. *Seluek on the Effects of Brown-Séquard's Extract in Hemiplegia.*—Dr. I. Seluek, of Destlagar, Caucasian Russia, records a noteworthy case of organic nervous disease which he treated by Brown-Séquard's emulsion. The patient, a retired soldier, aged sixty-six, was admitted to a local lazaretto about a twelvemonth after an apoplectic attack. On examination, there were found left-sided hemiplegia, angular contraction of the left upper limb, wasting of both of the paralysed extremities, aphasia (his speech being

limited to a couple of meaningless sounds), tremor of the tongue and right upper limb, exaggerated patellar reflexes, weak and slow (66 per minute) left radial pulse, anorexia, and constipation. In all, thirteen injections of testicular emulsion were made in the course of twenty-six days, the materials being derived from dogs (on nine occasions), rabbits (two), and rams (two). The following results were obtained: the patient's speech became intelligible, his spirits cheerful, appetite and intestinal action normal, the pulse stronger and more frequent, the bodily weight increased, wasting of the paralysed limbs decreased, the condition of the left lower extremity improved to the extent that he could get up from his bed by himself, and even make some steps when supported. In a fortnight after discontinuing the injections, however, a gradual relapse ensued, an apparently permanent improvement being limited to cheerfulness and normal appetite and stools. The author draws the following conclusions from his observations:—(1) Most decidedly, Brown-Séquard's emulsion manifests a marked stimulant action on the nerve-system in hemiplegia; (2) the effects, however, are fleeting; (3) a canine emulsion acts by far more energetically than the fluid from rabbits or rams; (4) the injections cause some local pain and congestion. [Therefore, on the whole, Dr. Seluek's results tally with those obtained by Prof. Kostuerin, and Drs. Rostichinin, Pototzky (*vide* the LONDON MEDICAL RECORDER, June, 1890, p. 208), and P. K. Hausner, Tiktin, and Rosenstein (*Vratch*, Nos. 29 and 30, 1890, p. 647). The latter three observers made their conjoint experiments (with testicular fluid from rabbits and guinea-pigs) upon themselves (to study the action on healthy subjects) and thirteen patients suffering from either functional or organic nervous affections. They sum up their experience as follows:—(1) In cases of stable organic changes or degeneration of the central nervous system, the injections may manifest a distinct general tonic action on the latter, but they are powerless to restore such functions of organs as are disturbed in consequence of a permanent destruction of nerve-tissue. (2) In cases of recent or temporary organic changes, or in functional affections of the nerve-system, the emulsion can improve the tone of the latter, and the patient's general nutrition and *eo ipso* promote or accelerate the process of recovery. (3) The injections may cause a considerable local pain, but otherwise are perfectly innocuous (out of two hundred and thirty injections made by the authors only one gave rise to some local swelling and inflammatory œdema of subcutaneous cellular tissue). A detailed account of the authors' researches will appear in the *Saint Louis Medical and Surgical Journal*, Nov., 1890.—*Reporter*.] VALERIUS IDELSON, M.D.

834. *Lanfenauer on Bromide of Rubidium and Ammonium in Epilepsy.*—Dr. Lanfenauer, of Budapest, considers this salt as giving better results than KBr. His prescription gives a gramme of the double salt in each tablespoonful, and he orders from two to eight grammes daily. *Application in Earache.*—Camphorated chloral five, glycerine thirty, oil of sweet almonds ten grammes. Soak a little cotton wool in this, and insert in the ear. *Powder for inhalation in coryza.*—Menthol 0·2, cocaine hydrochlorate 0·10, boric acid in powder 10 grammes. Another consists of menthol 0·2, mixed with roughly-powdered roasted coffee 10 grammes.

835. *Chabannes on the Treatment of Dyspnœa by Inhalations of Carbonic Acid.*—The author has previously made this method the subject of his inaugural thesis. The idea is due to Prof. Weill, and is founded on experiments by Prof. Brown-Séquard, viz., that in the reflex are concerned in respiration the point of departure is the superior laryngeal nerve, the centre is the medulla oblongata, and the return path is constituted by all the respiratory nerves which emerge therefrom. CO_2 acts probably by inhibition, not by causing pharyngeal anæsthesia. Great success is claimed by the author, who obtained negative results only in pertussis. The author considers CO_2 inhalations far superior to narcotics, *e.g.*, opium, belladonna, datura, etc., the action of which is purely ephemeral. The apparatus used was Limousin's oxygen apparatus, but sometimes the simple plan was adopted of holding under the patient's mouth a tumbler containing sodium bicarbonate and tartaric acid, with water. Deep and regular inspirations were made for a couple of minutes, and this was repeated two or three times a day. At Vals the CO_2 is given off from the earth, and is distributed at pleasure by tubes and taps. The inhalations are not merely palliative, but positively beneficial, though the author does not regard the method as absolutely curative in emphysema. In this disease it diminishes the aptitude for aggravation of the disease by atmospheric changes, and the patients accordingly become stronger and more resistant, hence life is prolonged. Dr. Chabannes is of opinion that CO_2 inhalations, in all chronic respiratory diseases, accompanied by dyspnœa, have an action resembling that of cold-water applications in chronic rheumatism and (certain) nervous diseases. The exact mode of action of CO_2 topically is not known; it often heals conjunctival and laryngeal "granulations," together with the accompanying inflammation. In 1784, Ingenhous, of Holland, used it in burns. The bronchial muscles regain their tonicity (Stokes) as soon as inflammation has subsided, hence its usefulness.

836. *Rosenbach and Pohl on the Antagonism between Iodine and Salicylates as regards Exudations and Transudations.*—The authors come to the following conclusions:—(1) Salicyl-compounds given internally pass not only into the urine, but into the fluids of serous cavities, also joints, peritoneum, and pleura. They appear in all transudations due to stasis, and also in purulent exudations, though in smaller quantities. But they are not to be found in the saliva, the intestinal contents, nor the bile. In particular, sodium salicylate cannot be found in the stomach, when, after its introduction into the rectum, it can be shown to be present in the urine. (2) Iodine-preparations after internal or subcutaneous application pass into the urine and saliva; like the above, they are to be found in transudations into the skin, abdomen, and pleura in various diseases, but, unlike them, *they never pass into serous or purulent exudations*. Moreover, iodine, though freely given, is never to be found in the synovial fluids or membranes, whether in health or disease. (3) Sodium salicylate injected into joints or serous cavities, when transudations or serous or purulent exudations are present, is always to be found, after a short time, in the urine. (4) The same is true for iodine. (5) The fundamental difference, then, between iodine and salicyl is that the latter, however given, is found in all serous cavities and in the urine; whereas iodine, given by the mouth in the usual doses, passes only into transudations, but never into joint-cavities, whether normal or inflamed. The therapeutic consequences are self-evident.

837. *Kuehn on Mollin, a new Ointment-base.*—The

author first points out the drawbacks which belong to our present ointment-bases. Animal (ordinary) fat becomes rancid; cholesterin-fat (lanolin) is too tenaceous for inunction, it does not dissolve chrysarobin, and it does not subdivide mercury finely enough; vaseline is, indeed, constant, but unless quite pure irritates the skin; moreover, it takes up substances with difficulty, and in hot weather is soon fluid on the skin. Unna, in 1885, pronounced soap to be the best substance. The difficulty was to find a pasty soap that would remain unaltered at ordinary temperatures, have penetrating properties, and mix well with other things. The soap called Mollin, prepared by apothecary Carez, is said by Dr. Kuehn to fulfil these requirements. Mollin appears to be a superfatted soap, holding 17 per cent. of fat in excess. (We have several such soaps in England.) It contains a little cocoa-nut oil and 30 per cent. of glycerine, besides kidney fat, tallow, and potash and soda mixed, chiefly potash. It is said to keep unaltered for years; it is put up in two forms, one a little harder than the other.

838. *Lailler on Indian Hemp.*—In the *Bulletin Général de Thérapeutique*, M. Ed. Egasse has published an excellent study of Indian hemp, which has induced M. Lailler to say a few words on the subject. *Cannabis sativa* is called *c. indica* only to indicate its origin, the species is the same as the European. In 1846, H. Smith, of Edinburgh, obtained a resinous substance, called by him, cannabine. In 1857, Pérsonne, by re-distillations of the infusion, obtained two products, one liquid, which he called *cannabène;* the other, solid, which he called hydrate of cannabene (or *vice versâ ?*). Siebold and Bradbury obtained an alcaloid which they proposed to call cannabine. Matthew Hay, of Edinburgh, found several alcaloids; to the most important, apparently, he gave the name tetano-cannabine, from its tetanizing action. Merck (Darmstadt) finds a glucoside, which he calls cannabine. Bombelon, traiting this with zinc oxide, obtained a substance which he called *cannabinon.* This substance, in doses of five or ten centigrammes, he states to be an excellent hypnotic, causing no excitement, therefore very useful in hysteria, but contra-indicated in heart-disease. (M. Lailler remarks that, from the cannabis sativa of Europe, a substance has been extracted which induces sleep in hysteria and some forms of insanity.) In 1887, Jahns isolated a base called choline, the amount varied much with each parcel of the plant, but as it never passed beyond one-tenth per cent., it cannot represent the active agent of the drug. In India, in Persia, in Turkey, in Egypt, in Algeria, the people make use of the plant to excite sensations somewhat analogous to those caused by opium. O'Shaughnessy recommends the tincture in traumatic tetanus. R. Green (Berry Wood Asylum) employed it in migraine; also Mackenzie, of America. Berthier (Bicêtre) states that doses of five centigrammes of the hydro-alcoholic extract only excite; he used fifty centigrammes to produce sleep In this dose, Fronmuller caused deep sleep in 130 cases, partial effects in 255, and none in 253 cases. M. Egasse recommends the following mode of preparation:—*Extract:* Fresh leaves and flowering tips of female hemp, one part; alcohol, at 90°, five parts; macerate seven days; , four, press; and filter; distil partly and evaporate to a soft extract. *Tincture:* Alcoholic extract, 30 grammes; alcohol at 90°, 600 grammes. It appears to act best when combined with chloral and KBr. E. J. Edwardes, M.D.

839. *Hudson on Veratrum Viride and Morphine in Tonsillitis.*—Dr. Hudson insists on the rapidity with which tonsillitis can be relieved by the administration of the following mixture:—℞ tincture of veratrum viride, ♏xxx.; sulphate of morphine, gr. iss.; distilled water, ℥vi. A teaspoonful to be given twice, with an interval of an hour, and then every two or three hours, as may be required. He relates a number of cases in which the treatment has proved eminently successful, and he asserts that he knows of no drug or drugs which have the power to control inflammation equal to these agents. They harmonize well together. The liability of nausea to follow the use of either of them alone is greatly modified by their combination. Hence there is reason to believe they exert therapeutic powers, when in conjunction, that are absent or lost when used separately.

Gynæcology and Obstetrics.

RECENT PAPERS.

840. Campbell, Dr. W. Macfie.—On Conception with Unruptured Hymen. (*Edinburgh Medical Journal*, Sept., 1890.)

841. Mackness, Dr. G. O. C.—On Heart-Disease in Pregnancy and Labour. (*Edinburgh Medical Journal*, August, 1890.)

842. Spanton, Mr.—On the Treatment of Uterine Tumours. (*Provin. Med. Jour.*, Sept., 1890.)

843. Carney, Mr.—On Cocaine in the Vomiting of Pregnancy. (*Australian Med. Jour.*, June, 1890.)

844. Barton, Dr.—On a Successful Case of Batty's Operation. (*The Dub Jour. of Med.*, Sept., 1890.)

845. Wright, Dr.—On a Case of Tetanus of the Uterus treated by Antipyrin. (*Canadian Practitioner*, Aug. 16, 1890.)

846. Mitchell, Dr.—On Two Cases of Severe Vomiting of Pregnancy. (*Times and Register*, Aug., 1890.)

847. Péau, M.—On the Operative Details of Total Vaginal Hysterectomy. (*Bull. Gen. de Therap.*, Sept. 3, 1890.)

848. Montgomery, Dr. E. E.—On Six Cases of Vaginal Hysterectomy. (*Med. Bull.*, No. 65, 1890).

849. Biggar, W.—On Three Cases of Cæsarean Section, one of which necessitated Porro's Operation. (*N.Y. Med. Record*, Sept. 27, 1890.)

Art. 840. *Campbell on Conception with Unruptured Hymen.*—So much importance, from a medico-legal point of view, attaches to indubitable examples of conception taking place in women who, so far as anatomical evidence can testify, are *virgines intactæ*, that the addition of a well-authenticated instance to those already recorded is worthy of especial note, as proving the non-necessity for penetration of the male organ as a prerequisite to fertilisation of the ovum of the female. Such cases possess also a physiological value, as well as tending to destroy the superstition which regards the direct passage of the seminal fluid from the penile urethra into the cervix uteri as essential to impregnation. A well-marked example in point is described in the above-mentioned paper by Dr. W. Macfie Campbell, of Liverpool, the subject of the observation being a young unmarried woman in whom the hymen remained perfect, its aperture only just admitting the forefinger. Intercourse, of an imperfect kind, had taken place between the patient and her *fiancé* on two occasions, neither penetration nor attempt thereat having resulted. The fact of conception having occurred under the circumstances was, however, conclusively proved by the discovery of the fœtal heart-sounds.

841. *Mackness on Heart-Disease in Pregnancy and Labour.*—The author of this communication gives full notes of a remarkable case in which, in a primipara, labour was complicated by the existence of disease ot both aortic and mitral valves, stenosis and incompetency being present in both structures. The woman was twenty-four years old, and it was interesting to observe how the embarrassment of circulation dependent on the cardiac lesions became intensified under the circumstances attending the gravid state. The patient, however, successfully passed through the dangers of pregnancy and parturition; and not only was the labour not premature, but occurred at even a later period than the full term. Dr. Mackness argues that the cause of danger in these cases lies in the congestion of systemic and pulmonary veins, and that being especially produced in the early stages of mitral disease, particularly stenosis; therefore this is the most dangerous lesion that can arise. In advanced aortic disease, also, the same conditions arise, so that this, too, is of serious import as a complication of the pregnant state. The arguments necessary to support the view here expressed are the subject of the concluding section of the article. C. H. Wade, M.D.

842 *Spanton on the Treatment of Uterine Tumours.*—Mr. Spanton records some cases of uterine tumours which have been decidedly improved or quite cured by adopting Apostoli's method of treatment by electrolysis. The author states that it is hopeless to convince those who will not use this method, but he himself has no doubt of its influence on the growth of uterine enlargements. Mr. Spanton uses a Stöhrer battery with positive pole and platinum electrode within the uterus, and clay outside. At first he uses about seventy-five milliampères for five minutes, and increases to about 150 milliampères for ten minutes once a week. The only trouble is to make the patient continue the treatment for a sufficiently long time, as it often takes some months to reduce the size of the uterus, and again in many patients the application causes a good deal of pain, which some are quite unable to bear, and it has to be given up.

843. *Carney on Cocaine in the Vomiting of Pregnancy.*—Dr. Carney records a case in which cocaine stopped the vomiting of pregnancy. The patient was a married woman, who had previously been pregnant four times, and in each pregnancy she early suffered from vomiting. When seen by the author, she was pregnant at the third month, and had been troubled for two weeks with constant vomiting. After trying all kinds of drugs, Mr. Carney decided to use cocaine, as he noticed the os uteri was much swollen and bled freely when touched. He applied a saturated solution to the whole of the vaginal wall, the cervix and cervical canal, and a suppository containing one grain, with a quarter of a grain of morphine, was placed against the os uteri. No vomiting occurred for eight hours after the application, when the cocaine was repeated; after this the patient was quite well.

844. *Barton on a Successful Case of Batty's Operation.*—Dr. Barton records the case of a girl, aged twenty six, n whom he performed oöphorectomy with marked success. The patient was a rather stunted girl, with a history of a constant pain in the left side of the abdomen and shooting down the left leg. At times, the pain would come on severely, and she vomited a great deal, at the same time the abdomen would be distended with flatulence. Diarrhœa was also a common symptom, and at times she had to be fed with enemata, as the vomiting was so persistent. After keeping her in hospital for some weeks without any improvement taking place, the author suggested that the ovaries should be removed, and on putting the matter before her, she readily consented to the operation. On opening the abdomen, the left ovary was found to be slightly enlarged and marked with signs of old inflammation, the Fallopian tube and broad ligament being studded with minute cysts; this ovary and Fallopian tube were removed, and then the right ovary was excised, as it also presented signs of inflammatory disease. Three months after the operation, the patient reported herself as much stronger, and able to work. She was very pleased with the result of the operation, as the pain and sickness had left her, and she felt that the price she had paid by losing her chance of ever being a mother was worth the improvement she had felt in her general health since she had undergone the operation. Richard Neale, M.D.

845. *Wright on a Case of Tetanus of the Uterus treated by Antipyrin.*—This is a short report of a case treated in a lying-in hospital, Toronto. The patient was a primipara, aged twenty-two, of sedentary habits. Always been well, with the exception of leucorrhœal discharges for the last two years. The pelvic outlet was found to be slightly narrowed; pregnancy normal. First stage of labour prolonged owing to rigidity of os and premature rupture of membranes. From these causes the duration of the first stage extended over twenty-four hours, although three fifteen-grain doses of chloral hydrate were given to relax the os. The head then descended rapidly half down the vaginal canal, and progress again became slow. At the end of forty hours, the head was well down in the perinæum, but the rigidity of external parts rendered the pains ineffectual. Symptoms of exhaustion then began to appear. The pains became shorter and more frequent, while the pulse increased over 100, and the patient complained of nausea and thirst. Before very long it became impossible to make out distinct intervals between the pains, and on examination the uterus was found retracted, and in a state of *tonic* contraction. Dr. Wright ordered three fifteen-grain doses of antipyrin, one every quarter of an hour. Before the second dose had been given patient felt easier. After the forty-five grains had been taken, the pains were about three minutes apart, and the tetanic contractions had disappeared. The head, how ever, being very large in proportion to the outlet, as head was delivered with forceps under chloroform The uterus took three-quarters of an hour to contract properly, after the administration of ergot in drachm doses. Dr. Wright remarks that the results obtained from antipyrin in this case would seem to justify its early use in uterine tetanus, before the muscle-fibres and nerve-centres are exhausted by prolonged tonic contractions. It seems probable that the drug acts directly on the nerve-cells in the parturient centre in the lumbar cord, lessening their irritability.

846. *Mitchell on Two Cases of Severe Vomiting of Pregnancy.*—The first case was that of a married

woman pregnant for the second time. Her first pregnancy, six years before, was marked by severe vomiting, resulting in extreme prostration and succeeded by a tedious labour, which was followed by symptoms of septicæmia. Her health was not completely restored when, in 1888, she again became pregnant. The excessive vomiting recurred with severe nausea and gastralgia. No cause could be made out, and after three weeks of ineffectual treatment, during which she gradually lost strength, it was decided to induce labour. Electricity was selected as the safest method, and a daily *séance* of fifteen or twenty minutes of the faradic current, as strong as could be comfortably borne, was given for six days. One pole was placed over the abdomen; the other, a uterine sound, introduced, with antiseptic precautions, *into* the cervix, but not through it. Soon after the sixth application, uterine pains with slight hæmorrhage came on, and the fœtus was expelled in about five hours. The placenta not following promptly, two fingers were introduced, and the already loosened placenta easily removed. A few adherent fragments were removed by the curette, and the uterus irrigated with a 1-3000 bichloride solution. The fœtus was apparently of about twelve weeks' gestation. After the third or fourth application of electricity there was an amelioration of the vomiting, complete relief after the abortion, and prompt recovery to as good a state of health as preceding the pregnancy. Her general health had since very considerably improved. Case II. was that of a woman, aged twenty-seven, who, prior to her marriage, had suffered from what appeared to have been pelvic peritonitis. Severe vomiting supervened within a fortnight of the first missed period, and effectually put a stop to alimentation. Various methods of treatment were resorted to, including iced drinks, oxalate of cerium, rectal injections of chloral and bromide of potassium, morphia, etc., with nutrient suppositories and injections. The treatment was continued for nearly three weeks, sometimes with apparent benefit; but the symptoms invariably returned until miscarriage took place, when they disappeared for good. The author remarks that rectal feeding was in this case partially successful, but the nutrient injections were only retained while the patient was under the influence of opium. Iced champagne was very grateful to the patient, and was retained when other things were rejected. In neither case was there any history or physical signs of tuberculosis, nor was either patient the subject of the strumous diathesis.

847. *Péau on the Operative Details of Total Vaginal Hysterectomy.*—In a paper read before the Medical Congress at Berlin, the author observes that when the lesions of the uterus are not too voluminous, and when it has preserved its solidity and mobility, the organ can easily be extirpated, thanks to the method of preventive compressing of the lateral vessels, this operation requiring no ligatures at all. When, however, its parenchyma is softened by inflammation, when it is infiltrated with pus, it is the seat of degenerative changes, and *a fortiori* when it is the seat of tumours exceeding in size the head of a fœtus at term, it is indispensable to take it away in fragments. He proceeds as follows:—The patient, duly anæsthetised, is placed on the left side, the rectum and bladder having been emptied. Strict antiseptic precautions are enforced, and the vagina is kept patent by assistants furnished with four retractors with handles at right angles. The operation itself comprises four stages:—(1) The pulling down and freeing of the cervix; (2) clamping the broad ligaments; (3) removal of the cervix; (4) putting into pieces and removal of the body of the uterus. He removes the cervix by means of dentated forceps. It is separated of adjacent structures by means of straight scissors and the scalpel, right up to the body of the uterus, and the dissection is carved round the periphery in such wise as to separate the uterus completely from its vaginal attachments. This, of course, involves opening up the peritoneal cavity. At this stage the broad ligaments are clamped, pushing the forceps as high and as near to the uterus as possible. Then the cervix is kept down by serrated forceps, while, with the right hand, the lateral parts are cut through with a straight scalpel from within outwards. This having been done, the two lateral halves of the cervix are resected, and any bleeding vessels being secured by means of pressure-forceps. The body of the uterus is then cut into in the same way, viz., on the sides and from within outwards, and is thus divided into an anterior and a posterior part. These are grasped one after the other with a strong forceps, and they are further subdivided, until the fundus of the uterus comes into sight. When this is the case, the upper portions of the broad ligaments, which can now be got at, are clamped in their turn. All danger of hæmorrhage having thus been provided against, the "fragmentation" is proceeded with and the pieces removed. If the tubes or ovaries are found to be diseased, they are removed also. The uterus having been removed, the cavity is large enough to enable the surgeon to thoroughly cleanse the peritoneum. A catheter is then left in the bladder, and the vagina is packed with iodoform gauze. The pressure-forceps are left *in situ* for forty-eight hours, when they are gently removed. He has never seen any hæmorrhage follow this step. Thenceforth, all that is required is to wash out the cavity thrice daily with a sublimated solution. The patients are usually able to leave their beds by the tenth day, and by the fifteenth all danger of complications may be considered to have disappeared. Out of sixty patients subjected to total vaginal hysterectomy for inflammation, suppuration, or adhesions, there was not a single failure, and out of a total of two hundred women operated upon in this way for uterine myomata ninety-eight per cent. proved successful.

848. *Montgomery on Six Cases of Vaginal Hysterectomy.*—The author observes that it is only by the accumulation of cases that we are enabled to judge of the practicability and expediency of any procedure. He recalls that the removal of the uterus is an old operation, having been done as early as 1560. It was removed by the vagina by Sauter, in 1822, and the operation repeated by Langenbeck, Blundell, Recamier, and others, until West could report twenty-five cases with twenty-two deaths. So frightful a mortality was not conducive to the continuance of its practice. The modern operation was introduced by Czerny, in April, 1879, but he was impressed so unfavourably with the operation, that his next two operations were done by Freund's method, and it was only after the operation was successfully performed by others, that he returned to the vaginal method. Of his own six cases, the histories are as follow:—Case I.—Mrs. McC., aged forty, mother of two children, was seen with Dr. Nock. She had suffered from hæmorrhages, pain, and an offensive discharge for some months. Microscopical examination revealed the disease to be malignant.

The uterus, however, was freely moveable, and the disease confined to the cervix. On October 4, 1888, the patient was placed in the lithotomy position, the vaginal mucous membrane cut through with the knife, and the tissue pushed back before and behind, until the peritoneum was reached; the latter opened posteriorly, and a large sponge introduced, the latter with a string attached, by which it could be more readily removed. In the care to avoid injuring the bladder, the dissection was carried into the body of the uterus, thus lengthening the time required for the operation. The dissection was completed by passing two fingers behind the uterus and over the fundus. After opening and tearing off the anterior peritoneum, the organ was anteverted, the broad ligament seized with forceps, and the uterus cut away. The forceps sprung, permitting a portion of the ligaments to slip out. Some bleeding vessels were seized with the hæmostatic forceps, so that the patient was placed in bed with eight forceps hanging from the vagina. The only dressing was a tampon of iodoform gauze. No sutures and no further drainage. Duration of operation, one and a-half hours. The small forceps were removed at the end of thirty hours; the large ones were permitted to remain sixty. The convalescence was very satisfactory, and not attended with an unpleasant symptom; maximum temperature, 100° F. Case II.—Mrs. D., aged fifty-one years, the mother of several children, ceased to menstruate at forty-six. A year ago she had a bloody discharge, which at times amounted to hæmorrhage. She was pale and weak; the cervix was healthy, the body of the uterus enlarged and hard; the introduction of a small probe was followed by bleeding. Scrapings obtained by curetting the cavity were negative. Carcinoma uteri was diagnosed, and on February 14, 1889, vaginal hysterectomy was performed. Temperature immediately after the operation, 96·2° F. Subsequent progress normal. The examination of the uterus did not confirm the diagnosis of malignant disease. Duration of the operation, thirty minutes. Case III.—Mrs. S., aged forty-two years, the mother of two children, had had hæmorrhage for two years, with considerable pain and an offensive discharge. The uterus was freely moveable; no thickening of the broad ligaments, but the cervix was excavated and the vaginal portion destroyed. On July 5, 1889, extirpation was done. The operation was rendered difficult by the loss of the cervix, by a long, narrow vagina, and the inability to depress the uterus, which was also hypertrophied. The uterus was situated so high that it was impossible to pass the finger over the fundus to bring down the broad ligament; so the latter was burrowed through below the ovarian artery and the clamp applied on either side, the portion of the ligament compressed, cut through, which permitted the uterus to be depressed until forceps could be applied above the ovaries, and those organs removed with the uterus. Duration of operation, thirty-five minutes. Temperature, 95° F.; became normal in a few hours. Subsequent progress excellent for one week. Played with a pet dog on the seventh day; following day complained of stiffness of the jaws, which developed into severe tetanus, and death occurred on the fourteenth day. Case IV.—Mrs. L., aged forty-eight, had had seven children and four miscarriages, the last (instrumental) labour five years ago. Examination showed that the cervix was lacerated, the posterior lip enlarged, and its mucous membrane everted, abraded, and hypertrophied. It bled slightly during the examination. The body of the uterus was enlarged, elongated, and retroverted. It was freely moveable, and there were no indications of the extension of the disease from it to either the vagina or broad ligaments. A section of the diseased posterior lip was removed, and subjected by Dr. Laplace to microscopical examination, who pronounced it epithelioma. Extirpation of the uterus was advised, and was done at the Medico Chirurgical Hospital, on Oct. 31, 1889. Duration of the operation, thirty minutes. Upon opening the uterus, the lining membrane of the entire body was found involved. The temperature fell after the operation to 96°, but reached normal in a few hours. Upon the sixth day the temperature began to rise, and continued between 101° and 103° for several days. The patient left the hospital well at the end of the third week, and was still in good health in the following May. Case V.—Mrs. S., age forty-five years, was the mother of several children, and had enjoyed good health until within a year, when uterine hæmorrhage set in, and occurred every few weeks without reference to menstruation. Examination disclosed a healthy cervix. The introduction of the sound was followed by a discharge of blood; the body of the uterus was somewhat enlarged, and this, with the pain and irregular hæmorrhage, led to the belief that she was suffering from cancer of the body of the organ. The extirpation of the uterus was advised, and the patient was operated upon on Jan. 20, 1890. Duration of operation, thirty-five minutes. Temperature following the operation, 96°. By carelessness of the nurse, during the shock, she was burned by contact with a hot bottle. She suffered greater inconvenience and distress from this burn than she did from the operation. This elevation of temperature was due in part to the burn, from which there was a considerable slough, and in part to the sloughing in those portions of the broad ligaments which had been included in the grasp of the clamps. The patient entirely recovered, and has since been in good health. The specimen disclosed that the hæmorrhage had arisen from a small submucous fibroid situated near the fundus uteri. A number of fibroid growths were found in the walls of the organ, so that the operation, while rather severe, may be said to be an effectual method of cure. Case VI.—Mrs. H., aged forty-one years, mother of several children, had suffered for a number of months from uterine hæmorrhage, attended with the discharge of small patches of tissue, and with considerable pain. The cervix presented a granular, friable surface, which bled upon the slightest pressure. The condition was diagnosed as epithelioma. The uterus was freely moveable, no involvement of the vagina or the broad ligaments. Operation, March 29, 1890. Duration of operation, fifteen minutes. Clamps removed in twenty-four hours. The temperature remained high for nearly three weeks, when it subsided. The patient ultimately fully recovered. The author observes that six cases are too few, and the time which has elapsed since they were operated upon too short, to base a judgment upon the value of the operation as a curative procedure. A careful study of the progress of the disease, however, would, he thinks, lead us to feel more hopeful for the future of the patient suffering from uterine cancer, in whom the whole uterus has been removed.

849. *Biggar on Three Cases of Cæsarean Section, one of which necessitated Porro's Operation.*—Case I.—Mrs. S——, aged twenty-eight, German, in height four feet, weighed fifty-five pounds. Perfect physically except a rachitic pelvis. Married five years, with four pregnancies. In each of the three former births the

child was destroyed to save the mother. Earnestly desiring a living child, at the expiration of eight months of gestation, she came to the Huron Street Hospital. At full period labour began at 8 a.m, December 16, 1886. At 9 p.m. of same day, when os had dilated to the size of a silver dollar, and before the escape of water, the child was removed by laparotomy, after the method of Sänger. Time of operation fifteen minutes. Immediately on removing the child and placenta, a hypodermic injection of thirty minims of normal fluid ergot, was given. Both mother and child did well. Case II.—Mrs. K——, aged forty-three, German parentage, mother of two living children, and one still-born, at seven months. After seventy-two hours of labour. on August 6, 1888, she became very exhausted, and an operation seemed unavoidable. After anæsthetizing she was examined, and the diagnosis of the attending physician confirmed, viz., that of a fibroma of neck and body of uterus which rendered it impossible to reach the os. He delivered the child and placenta by Cæsarean section, after which the uterus with tumour was removed after the manner of Porro. The weight of child was twelve pounds, and of tumour ten pounds. The child had been dead several hours previous to operation. The patient improved up to the tenth day, when an oozing of bright blood from the stump, which was external and held by Keith's clamp, was noticed. He was summoned, but before he could reach the patient the hæmorrhage had been so great that the patient did not rally. Had she been in the hospital the hæmorrhage probably could have been controlled, and the patient saved. Case III.—Mrs. W——, aged thirty-four, mother of two living children. Previous births were normal. Labour began June 1, 1889, under the care of a midwife. After five days of unsuccessful labour, a practitioner was called, who found transverse presentation, with a rupture of the womb in the lower anterior part. Upon his arrival the patient was in a state of collapse, with marked septicæmic symptoms. Though the recovery from rupture low down is the one most likely to occur without an operation, yet an immediate delivery seemed to demand a Cæsarean operation, as every effort to deliver the child had been unsuccessful. This was quickly done, the incision of the womb extending to and through the rupture. A partially decomposed child at full term was removed. The patient rallied well for twenty-four hours, but died from septic poisoning seventy-four hours after operation. It is not known whether the midwife gave ergot, or, if so, the dose. Dr. Biggar remarks that in these three cases thorough antiseptic surgery was followed, and he quotes Reed's aphorisms :—" All cases of complete rupture should be submitted to abdominal section as soon as the condition of the patient, with reference to shock, will admit, and for the following purposes: (1) To explore the abdomen; (2) to remove all foreign bodies; (3) to cleanse the peritoneum; (4) to close the rent if the labour should have been short and the uterus not seriously damaged; (5) to remove the uterus if the labour shall have been long and that organ seriously damaged."

Diseases of the Nervous System.

RECENT PAPERS.

850. MOYER, DR. HAROLD.—On a Case of Thomsen's Disease. (*Philadelphia Medical News*, Aug. 16, 1890.)

851. RUMPFF, PROF.—On Sensory Derangement and Ataxia. (*Contralb. f. d. med. Wiss.*, No. 23, 1890.)

ART. 850. *Moyer on a Case of Thomsen's Disease.*—This paper, read before the Chicago Medical Society, contains remarks on Thomsen's disease, with report of a case. The author refers his audience for the literature of the subject to Erb's monograph, published in 1866. In that article, Erb stated his belief that the disease is a tropho-neurosis of the muscles, forming a definite clinical group with characteristic symptoms. In January of the same year, Dr. Allan Hamilton states that the peculiar symptom-complex termed Thomsen's disease, is frequently found in other diseases, particularly in hystero-organic disorders, and in the third stage of posterior spinal sclerosis, and is by no means uncommonly associated with coarse cerebral lesions. Prof. Moyer remarks that the symptom of spasm at the inception of voluntary impulse does not alone constitute Thomsen's disease will hardly be denied; and that it may be occasionally associated with other organic lesions would seem to be attested by Dr. Hamilton's cases; at the same time he does not agree with that observer as to the frequency of its occurrence. Erb divides the cases so far reported into typical, doubtful, and symptomatic. In typical cases the lesion is always confined to the voluntary muscles, begins in early childhood, and probably in many cases is congenital. It is usually hereditary, or appears in families with a strong neurotic taint. The disease is characterised by a peculiar stiffness and cramp in the muscles, which comes on with the inception of voluntary motion, and which, after a time, gives way and permits the performance of the contemplated movement. After a certain number of repetitions, the movement becomes easier, and the cramp, which is painless, disappears. The contractions are always increased by cold and mental excitement. The muscles are commonly well developed and elastic, but do not contract so strongly as in health. The electrical reactions, according to Erb, consist in an increase in the excitability of the muscles, and a response, normal or diminished, to the stimulation of the nerve with both currents. The galvanic current gives a qualitative change, in that the ACC is prompter and stronger than the CCC. All contractions last several seconds after the stimulus is withdrawn. Dr. Moyer thinks that the pathological entity of the disease is established, yet he is not sure that the disease does not also occur later in life, in the so-called adult forms. His own case is, briefly :—W. H., aged 25, male. Father died of phthisis; no neurotic family history. Has used tobacco in excess, alcohol sparingly. Has worked hard since seventeen as a sailor, fireman, and engineer in various climates. No evidence of venereal taint. Two years ago he worked at a nail-factory, and present trouble began. His work required constant and rapid flexion and extension of the forearms, at the same time stepping from side to side. The first symptom noted was a slight stiffness, first on one side, then on the other; at first coming on at intervals of from a few days to a fortnight, but with progressive severity. Finally, he had to give up his employment, owing to the lessened control over his muscles. When grasping anything, it was impossible for him to loosen his hold promptly, and he experienced great uncertainty in attempting to walk, as he was likely to fall on his face, owing to the flexion of his legs. He now rises very slowly from his chair, and walks with a hesitating gait until he has taken a few strides. The contractions often persist for ten or fifteen seconds, and are always aggravated by cold and mental excitement. The patient has a fine physique, and the muscles are exceptionally well developed. The peculiar condition is absent on rising in the morning; but after he has been up for a few minutes the contractions begin, and seem to increase until after working a few hours, when they decrease. Since changing his work to that of a night-watchman, the disease has not been so severe. All the nervous functions, except motility, are perfectly intact. The reflexes are normal, and the patient eats and sleeps well, and has not the slightest pain. Muscles of face and mastication normal, also voice and mental characteristics. Electrical excitation of the muscles is followed by a long contraction, which persists some seconds after the current is broken. While the muscles appeared strong, their voluntary contractions were actually much weaker than they should have been. The professor adds that, while we cannot draw definite conclusions from a single case, yet this patient's history teaches that Thomsen's disease may occur in adults without special neurotic heredity, and from causes competent to produce other forms of nervous disorder.

David Walsh.

851. *Rumpff on Sensory Derangement and Ataxia.*—The following case appears of some importance as regards theories of the etiology of tabes dorsalis. A man, aged thirty-two, had paresis and some loss of feeling in the left leg, then numbness and loss of feeling first in the right hand, afterwards in the left; both upper limbs were weak. Careful examination of the sensibility showed lowering of all cutaneous sensations, slight in the lower limbs, but considerable in the upper. In the latter there was also considerable lowering of the feeling of position and its alterations, and of the feeling of passive movements, together with lowered strength. Contrary to the usual assumption, this patient showed no trace of ataxia, whilst another (tabetic) patient with similar derangements of sensibility showed decided inco-ordination. Hence, the observer considers Goldscheider's views incorrect, viz., that lowered sensibility, especially for position and passive movements, is the cause of ataxia. Leyden's theory of the sensory origin of ataxia is also combatted by this case. Investigations as to how far the eyes might substitute the lost feelings in the limbs led to the result that in healthy men, within certain limits, writing remains of the same size after the eyes are closed, as it was when written with the eyes open. In this case, the subject goes on writing with the eyes closed, after beginning to write with open eyes. But in patients with deranged sensations (of skin and movement), the letters are written larger when the eyes are closed. The same is the case in tabetic patients, if sensory derangement is present; also if lowered sensation is caused in healthy persons by a strong faradic current. In tabetic persons, the writing, of course, shows ataxia as well. In comment on the above case, we may be permitted to remark that possibly the patient may ultimately become tabetic; it is not asserted by Leyden that ataxia necessarily shows itself at the same time as the sensory derangements, the theory, in fact, assumes the contrary. Nor is it asserted that all sensory derangements cause ataxia.

E. J. Edwardes, M.D.

Pathology.

RECENT PAPER.

852. Popoff, Prof. Nikolai M.—On Morbid Changes of Nerve Elements of the Central Nervous System in Hydrophobia. (*Meditzinskoië Obozrenië*, No. 8, 1890, p. 194.)

Art. 852. *Popoff on Morbid Changes of Nerve Elements of the Central Nervous System in Hydrophobia.*—Prof. Nikolai M. Popoff, of Warsaw, has recently subjected to a careful microscopical examination the whole central nervous system from a man who died from hydrophobia (rabies). He found the following changes:—(1) Nerve-fibres, more especially those of the spinal cord, presented series of varicose inflations which, in incipient stages of the morbid process, were apparently caused by an unequal swelling of the myeline substance, while in later ones the nods proved to consist of a hypertrophied axis-cylinder alone, myeline having obviously undergone atrophy. (2) Nerve-cells were found to be more or less altered in all parts of the central nervous system, both the protoplasm and nucleus being affected. The protoplasm contained granules of a yellowish-brown pigment, which either lay heaped near this or that pole of the cell's body, or were accumulated around the nucleus, or filled up the whole cell. In the latter case, the cell presented a globular form, the processes being absent and the nucleus and nucleolus indistinguishable. As a rule, in the vicinity of such highly degenerated elements there could be seen heaps of the pigment-granules, which still retained the outlines of a nerve-cell. The nucleus was found to be similarly affected, losing its normal shape and becoming granular; sometimes it disappeared altogether, leaving its nucleolus, surrounded with irregularly scattered granules. Such nuclear alterations, however, by no means showed any parallelism with the protoplasmic ones. Sometimes a highly degenerated nucleus would be seen embedded amidst a but slightly altered protoplasm, or, *vice versâ*, a highly granular protoplasm would include an apparently normal nucleus. (3) The cellular changes proved to attain their maximum intensity in the following regions: in the anterior horns of the lumbar and, especially, cervical division (enlargement) of the spinal cord; in the motor nuclei of the medulla oblongata, in the posterior limbs of the corpus quadrigeminus, in large pyramidal areas of the frontal and para-central lobes of the brain. (4) In such regions where the granular degeneration was relatively slight, there could be simultaneously detected nerve-cells affected with opaque swelling. On the whole, Prof. Popoff arrives at the conclusion that (*a*) the hydrophobic virus attacks before all the cerebro-spinal motor centres; and (*b*) that the lesions are of an inflammatory nature (as Dr. Pokotiloff has first pointed out, which view is also supported by Dr. K. Schaffer's recent extensive researches.)

Valerius Idelson, M.D.

Bacteriology.

RECENT PAPER.

853. Sormani, Dr.—On the Action of the Gastric and Intestinal Secretions on the Bacillus of Tetanus. (*Centralblatt Allgemeine Patholojie*, Aug., 1890.)

ART. 853. *Sormani on the action of the Gastric and Intestinal Secretions on the Bacillus of Tetanus.*—Sormani has made a communication on this subject to the Medico-Chirurgical Society of Pavia. He caused herbivorous and carnivorous animals to swallow pure cultures of the bacillus, and also fed dogs and rats with the flesh of animals that had died of tetanus. In some of these experiments he allowed the gastric juice to retain its natural acid reaction; in others he neutralised it by means of carbonate of soda. In no case did the animal suffer the least harm. The tetanus bacilli were found unaltered in the fæces. From his numerous experiments, Sormani draws the following conclusions:—(1) The flesh of animals that have died of tetanus can be eaten with impunity. (2) The microbe of tetanus can pass through the alimentary canal of herbivorous or carnivorous animals without causing any symptoms. (3) The digestive secretions of these animals neither kill nor alter in any way the bacillus of tetanus. (4) An animal can introduce into its stomach with impunity a dose of the tetanic virus ten thousand times greater than that which is sufficient to kill if injected subcutaneously. (5) These facts throw some doubt on the theory that the symptoms of tetanus are due to the absorption of poisonous alkaloids, secreted by the bacillus. (6) The fæces of animals (especially of herbivorous animals) may possibly be a not insignificant agent in the distribution of the tetanic poison. W. A. FITZGERALD, M.D.

Syphilography.

RECENT PAPERS.

854. TOMASHEVSKY, DR. SERGHEI P.—On Syphilitic Infection Contracted by a Medical Practitioner during the Performance of an Obstetrical Operation. (*Vratch*, No. 20, 1890, p. 468.)

855. PORAI-KOSHITZ, DR. VLADIMIR I.—On a further Series of Cases of Extragenital Syphilitic Infection, observed during 1889. (*Meditzina*, Nos. 53 and 55, p. 433.)

856. ZÊLÊNEFF, DR. IVAN F.—On Extragenital and Extrasexual Syphilitic Infection amongst Soldiers of the Kiev Military District. (*Vratch*, No. 32, 1890, p. 735.)

857. SALZMANN, DR.—On Symmetrical Gummata in *iener. med. Wochenschr.* No. 27, 1890.)

858. DU CASTEL, DR.—On the Evolution of Chancre. (*Union Med.*, Aug. 26, 1890.)

ART. 854. *Tomashevsky on Syphilitic Infection Contracted by a Medical Practitioner during the Performance of an Obstetrical Operation.*—At a recent meeting of the Kiev Obstetrical and Gynæcological Society, Dr. Serghei P. Tomashevsky has related an instructive case of an extragenital and extrasexual syphilitic infection occurring in a doctor. The latter was called to attend upon an urgent case of labour, complicated with protrusion of an arm, the parturient being a syphilitic woman, with moist papules about her genitals. Without any delay the practitioner brought the patient under the influence of choloroform, and made turning, the operation lasting about twenty-five or thirty minutes, and proving most successful; both the mother and child were saved. In spite of all ossible precautions (irrigation of the woman's genitals with a carbolic acid lotion, smearing hands with carbolised oil, thoroughly washing out them after the operation, etc.), the doctor became infected. In about three weeks there developed three hard chancres on either forefinger, and the left middle finger, to be followed in due time by lenticular papules over the body, etc. [Pointing to this highly sad case (which is far from being very uncommon), and to the deplorable fate of such medical practitioners who happen to ruin their health through their professional devotion, Dr. Tomashevsky has introduced a motion to the effect that the said Society should petition the Government to adopt necessary measures for "improving the condition of medical men injuring their health when performing their duties." The resolution meeting a unanimous consent, the Society has appointed a special committee for elaborating the memorandum.]

855. *Porai-Koshitz on a further Series of Cases of Extragenital Syphilitic Infection, observed during* 1889.—Dr. Vladimir I. Porai-Koshitz, of Kharkov, contributes notes of the following four cases of extragenital primary syphilitic sore:—(1) A midwife, aged twenty-five, contracted the infection in May, 1888, when attending upon a syphilitic parturient, and delivering the latter of a child with pemphigus, the primary ulcers developing (one) on the left forefinger, and (several) the inner surface of the left wrist. Subsequently there appeared roseola, sore throat, alopecia, moist papules about the mouth, anus, and vulva, and multiple tumours (*gumma præcox*) on the forehead. When examined by the author, in February, 1889, the patient proved to be exceedingly emaciated and anæmic, downcast, and looking quite an old woman. On the outer surface of the terminal phalanx of the left forefinger, there was situated a dark-coloured, depressed scar, extending under the loose and disfigured nail. A similar dirty-bluish, but more superficial scar, was also seen on the wrist. There were further present universal polyadenitis (the left ulnar and axillary glands being especially affected), *leucodermia nuchæ*, intense pigmentation of the whole posterior aspect of the neck and the upper regions of the back, enlargement of the liver and spleen, cardiac palpitations, dyspepsia, osteoscopic pains (causing sleeplessness), and tibial periostitis. Under an appropriate treatment, the patient recovered. About a year previously to the syphilitic infection, the unhappy woman had contracted gonorrhœal ophthalmia (from a new-born infant), with a consecutive cataract in her right eye. (2) In a robust horseman, aged twenty-four, several days after a coition, there had appeared two large and deep ulcers on his abdomen. Under some domestic treatment (cauterisation with lunar caustic), the lesions had healed in two or three months. On examining the man four months later, the writer found two dirty-bluish, soft, depressed scars, one of which, of the size of a fourpenny piece, was situated slightly above the pubic hair-growth, to the left from the linea alba, and the other, as large as a florin-piece, somewhat higher up. The genitals were sound. Of other lesions, there were discovered enlarged inguinal glands, scanty, lenticular papules over the body, enormous labial, buccal, lingual, and faucial moist patches, alopecia and hoarseness. (3) A third case refers to a young, newly-married lady, who had had a coition *a retro* with her husband (possessing a big Hunterian chancre on the anterior or upper aspect of the collum penis). contracted a primary sore of the coccygeal fossa, in the sulcus, between her "luxuriously developed" buttocks. The lesion could be discovered only after

widely separating the massive parts, being otherwise completely concealed from view. The ulcer had the size of a farthing, and presented all typical features of a hard chancre. The inguinal glands were considerably enlarged and somewhat tender. The ulcer healed in a month after its discovery, but shortly afterwards there appeared anal ulcers (on piles), papules over the body, and enlargement of the cervical glands. The treatment consisted in the internal administration of tannate of mercury, and was followed by recovery. (4) The fourth patient, a Hebrew teacher, of twenty-four, had two hard chancres on the lower abdominal wall, one of which, of the size of a farthing, was situated just above the pubic hair-growth, to the right from the median line; the other, of a smaller size, in the "peno-pubic angle" on the same side. The upper sore had been first noticed about three weeks after a coitus at a brothel; the lower one a week later. The inguinal glands were typically enlarged on both sides. In about two months after the coition, syphilitic erythema cropped out all over the body.

856. *Zëlëneff on Extragenital and Extrasexual Syphilitic Infection.*—At a late ordinary meeting of medical men attached to the Kiev Military Hospital, Dr. Ivan F. Zëlëneff read a paper on the above subject, in which he says that during 1889 he has had under his care nine soldiers with extragenital hard chancres. In five of the cases the infection was of a non-venereal origin, the ulcers being situated in one, on the thigh; in another, on the the upper eyelid; in a third, about the mouth; in a fourth, on the right tonsil; and in the fifth, on the left posterior faucial pillar. All the patients were admitted with the lesion of from two to three weeks' standing. In the course of 1887 and 1888, other five cases of non-venereal syphilis had been observed in the hospital, the total number of syphilitic soldiers admitted during the triennial period (1887-89), amounting to 864 (which made about one-fourth or one-third of all venereal cases, while the latter formed one-fifth or one-fourth of the grand total of six soldiers treated during the three years). Dr. Zëlëneff adds that he was able to collect from international literature for 1889 alone, as many as 360 cases of extragenital hard chancres. In topographical regards, the cases were distributed as follows:—Lips, ninety-two (25·5 per cent.) cases; breasts, eighty-eight (24·4 per cent.); fauces, sixty-two (17·2 per cent.); upper extremities, thirty-eight (10·5 per cent.); body, twenty-seven (7·5 per cent.); tongue, twelve (3·3 per cent.); eyelids, nine (2·5 per cent.); cheek, seven (1·94 per cent.); chin, six (1·6 per cent.); lower extremities, five (1·38 per cent.); arms, five (1·38 per cent.); nose, four (1·1 per cent.); gum, two (0·5 per cent.); inner canthus, forehead and ear, each, one (0·27 per cent.). Drawing attention to a steadily increasing frequency of an extrasexual syphilitic infection, the author recommends the following measures for preventing its occurrence, as far as soldiers are concerned:—(1) A complete separation of syphilitic men (the formation of special syphilitic detachments) and all articles used by them (clothes, utensils, etc.); (2) frequent medical examination of all soldiers; (3) a periodical sending of syphilitic men to hospitals for a specific treatment; (4) lectures concerning syphilis and its consequences. (5) punishment for concealing venereal affections. In the course of a discussion, Drs. Lindstroem and Borovsky have emphatically disagreed with Dr. Zëlëneff in regard to his last measure, which would make things worse than ever. Dr. Solomka has suggested that syphilitic soldiers should be retained in the hospital for three or four months after the termination of a course of the specific treatment, since recidives usually occur within the said period. Dr. B. S. Schoenfeld has stated that of all the measures recommended by the author, a frequent medical inspection of the men would prove most efficacious.

VALERIUS IDELSON, M.D.

857. *Salzmann on Symmetrical Gummata in the Eyelids.*—Two cases showing symmetrical excavated gummata of the eyelids, at the Vienna Medical Society, recently by Dr. Salzmann. The first case showed a semi-circular defect in each upper eyelid, through the whole thickness of the lid; the borders of the ulcer were sharp and steep, its floor was covered with grey matter. The patient had improved already under a week's treatment with inunction, and the local application of grey ointment. In the second case, the ulcers had a saddle-shaped form on the lids, quite symmetrical, as in the last case. Such cases appear to be rare, to judge from their absence in the literature of the subject. E. J. EDWARDES, M.D.

858. *Du Castel on the Evolution of Chancre.*—Dr. Du Castel said he had only twice seen the first commencement of a chancre. In one case it was a small red spot which, in eleven hours, had turned into a papule. This he excised, but after several weeks the appearance of a red rash showed there had been some syphilitic affection of the system. In another case, a young man of eighteen, after the eruption had been noticed for ten hours, it still appeared as a papule which had already began to have a depression in the middle. In this case constitutional syphilis afterwards supervened. Sometimes it begins as a vesicle, instead of a papule. From his own observations, Dr. Du Castel believes that the hard chancre generally appears from twenty-five to thirty days after infection. It scarcely ever appears in less than ten days after contact. The period of incubation may be as long as three months. An intermittent disease, such as typhoid fever, seems to favour the prolongation of the period of incubation. He observes that it is a much-disputed question, if a syphilitic chancre leaves indelible marks behind it. As the result of his experience, Dr. Du Castel observes that the immense majority of chancres on a mucous surface leave no appreciable cicatrix. On the gland, and on the mucous coating of the prepuce, it is often impossible to find a trace of the sore a few months after. On the skin of the prepuce, there generally remains for several years a smooth, shining surface, surrounded by a zone of pigmentation, which is easily recognized by a practised eye. After several years, this discoloration generally disappears; but sometimes it seems to persist for an indefinite time. Dr. Du Castel has seen a case where the pigment remained for twenty-five years. Ulcerous chancres, whether of the skin or mucous, leave indelible depressed scars, but such scars may follow ordinary non-syphilitic ulcers.

W. W. IRELAND, M.D.

Dermatology.

RECENT PAPERS.

859. PASCHKIS, DR.—On a Method of Applying Lanolin (*Monats. f. Prakt. Derm.*, vol. xi., No. 5.)

860. Bœck, Dr.—On a Case of Psorospermosis. (*Ibid.*, No. 3.)

861. Hoisholt, Dr.—On a Case of Erythema Nodosum with Suppuration. (*Occid. Med. Times*, Aug., 1890; *ibid.*)

862. Montgomery, Dr. H.—On a Report on the Histological Examination of a Piece of Skin taken from the Forearm of Keanu. (*Ibid.*)

863. Nimier, M.—On Folliculitis Parasitaria Tonsurans of the Scalp. (*Gazette hebd. de med. et de chirurg.*, 20, 1890; *ibid.*)

864. Krokiewicz, Dr.—On the Relationship of Lupus and Tubercle. (*Przeglad Lekarski; The Lancet*, Sept. 27, 1890.)

Art. 859. *Paschkis on a Method of Applying Lanolin.*—Dr. Paschkis read a paper on lanolin before the Dermatological Section, at the meeting of the International Medical Congress, which was held at Berlin. He stated that applications of lanolin to the skin were harmless, and remarked that, in combination with soap and fat, it affords an efficient basis for ointments. In compositions of this kind it is liable to change. Combinations of Lanolin and mineral fats, however, do not alter. An ointment is recommended by him consisting of lanolin, paraffin, cetaceum and water. It is perfectly free from acids and is capable of absorbing fifty per cent. of water and any medicinal body.

860. *Bœck on a Case of Psorospermosis.*—At a recent meeting of the Medical Society of Christiana, Dr. Bœck showed a patient suffering from psorospermosis, which had existed for sixteen years. Papules, varying in size, were scattered, to a greater or lesser extent, over the whole of the body. This case was exactly similar to that shown at the Dermatological Congress at Paris by Darier, which he named *psorospermose folliculaire végétante.* In the sections which were exhibited, numerous encysted coccidia were observed situated in the epidermis, particularly in the stratum granulosum. The epidermis had become loosened from the papillary body, where the process was much developed. The papillæ were ramified and elongated. At a meeting held on November 20, 1889, two sons of the above-mentioned patient were shown by Dr. Bœck, both of whom suffered from this affection, which was situated on the same parts of the body as in the case of their father. Pyrogallic acid, used as an ointment, produced a favourable result. No applications had been used in the other case.

861. *Hoisholt on a Case of Erythema Nodosum with Suppuration.*—Dr. Hoisholt relates a case of this kind in a patient, aged sixty, who had never suffered from rheumatism. The disease developed somewhat suddenly on the backs of the hands, appearing first on the one hand, then on the other. The nodules were characteristic of erythema nodosum. On the right hand, which was first attacked, a somewhat large abscess formed, from which, on incision, about a tablespoonful of matter escaped. The other nodules healed without surgical interference. The diagnosis rests upon the following symptoms:—Symmetry of the eruption, pain, absence of irritation, the diffusion of the nodules in the surrounding skin, their central, blue-red depression, the appearance of the nodules in batches, the favourable effect of salicylic acid, etc.

862. *Montgomery on a Report on the Histological Examination of a Piece of Skin taken from the Forearm of Keanu.*—Dr. Montgomery states that a portion of skin was removed by Dr. Swift from that part of the forearm of Keanu in which the inoculation of lepra virus had been made. The section was placed in alcohol and forwarded to Dr. Montgomery for microscopical inspection. Lepra bacilli were found scattered through the layers of the skin, in some parts very thickly. Bacilli were found in the tissue, as well as in the so-called "lepra-cells," in which they were found in groups. The author considers it strange that, as was found to be the case in the specimen excised, the mere existence in the skin of great numbers of lepra bacilli does not necessarily cause disturbances to a considerable extent of the nutrition of the tissue. At one part only, was granulation tissue observed, and there was but little of it.

863. *Nimier on Folliculitis Parasitaria Tonsurans of the Scalp.*—The author states that in a Paris regiment he observed a slight epidemic of an affection which has been described by Lailler under the name *Pelade pseudotondante*, and by Besnier under the title *Pelade à cheveux fragiles.* The round or oval patches of alopecia measure from two to four centimètres in diameter, and are unsymmetrically situated on the crown of the head. Black stumps of hair follicles occupy the diseased part, or very short hairs are found upon it, which are easily extracted. The affection was developed in eight to ten days. Healing took place rapidly and was complete in two to four months. The hair grew again in a normal manner and was not preceded by lanugo hairs, as is the case in alopecia areata. Of fourteen patients who were in the same regiment, five had been under arrest. The author states that the common prison clothing may therefore have become the medium of contagion.

864. *Krokiewicz on the Relationship of Lupus and Tubercle.*—Dr. Krokiewicz discusses the identity of lupus with tubercle, and relates his own experiments regarding the point. Fifteen cases were examined by him, in three of which Koch's bacilli were easily observed. It was difficult to find the bacilli in the other cases. Inoculations of lupoid tissue were made upon twenty-three rabbits and a guinea-pig. Acute peritonitis caused death in five rabbits, and general tuberculosis occurred in four of the remainder. In most cases injections were made into the peritoneal cavity. Others, which were made into the eye and ear, produced no result. The author is of opinion that lupus is a tuberculous affection of the skin, but that the amount of tubercle virus is very limited.

Laryngology and Otology.

RECENT PAPERS.

865. Luc and Dubief, Drs.—On Adenoid Vegetations in the Naso-Pharynx at Different Ages. (*Arch. de Larying., etc.*, August, 1890.)

866. Bell, Dr. G.—On Intubation without the use of the Gag or Extractor. (*Journal of Amer. Med. Assoc.*, Aug. 20, 1890.)

867. Bishop, Dr. S.—On Atresia of the External Auditory Meatus. (*Times and Register*, Sept. 27, 1890.)

Art. 865. *Luc and Dubief on Adenoid Vegetations in the Naso-Pharynx at Different Ages.*—The authors point out that whereas there is a very general agreement that adenoid vegetations are most frequently met with between four and six years of age, there is less certainty as to the epoch at which they first appear, and especially as to that at which they diminish and disappear. As to the first point the authors have nothing new to say. The youngest child they have had occasion to operate upon was two years of age. Many others, however, have been operated upon at earlier ages than this. They deal almost wholly with the second question, the date of disappearance of vegetations. They maintain that their disappearance before the age of twenty, is by no means so constant as most descriptions of the subject imply. In proportion as we learn to diagnose adenoid vegetations, their presence in the adult will be found to be less uncommon. They cite cases illustrating the existence of adenoid vegetations in adult life. They also give an interesting description of the histological examination of adenoid vegetations in adults. They show that in young adults (twenty-five) adenoid vegetations have identically the same structure as in children. In older subjects there is an increase of fibrous tissue. This sclerotic process appears to develop at first in the neighbourhood of the blood-vessels, especially of the arteries. The adenoid tissue tends gradually to disappear before the encroaching fibrous tissue. This sclerosis and fibrous atrophy does not appear to occur in early adolescence, but rather in the second half of life, about the period when similar process tends to occur in other parts of the body.

866. *Bell on Intubation without the use of the Gag or Extractor.*—Dr. Bell has performed intubation over a hundred times, and has done so without using a gag. When the child opens its mouth he passes the left index-finger quickly into the mouth, and behind the root of the tongue. Gagging follows, and the larynx at once rises to the waiting finger. At this moment the tube is introduced with the right hand. There is no biting, after the finger is thrust into the pharynx, but the finger may be protected with adhesive plaster. The advantages claimed are that the operator does not need an assistant, and that the child is not excited, nor does it dread a repetition of the operation. In removing the tube Dr. Bell grasps the larynx externally with the fingers, and so presses the tube out of the larynx up to the fauces, and hooks it from the mouth with the finger. He, however. usually leaves the thread in the tube, and attaches it to the cheek to facilitate extraction. J. B. BALL, M.D.

867. *Bishop on Atresia of the External Auditory Meatus.*—The author states that only four cases of complete and permanent imperviousness of the external meatus had come under his observation during a practice of fourteen years. Case I. was a man, aged 32, who applied for treatment on Aug. 15, 1883. Several years previously he had been knocked over by a railroad train, severing the auricle from the head. The surgeon in attendance is said to have had no hopes of the man's recovery, but sutured the auricle to the side of the head to make the subject appear more presentable at his funeral. The result was that union of the parts took place in such a manner as to completely close the external canal, and deprive the patient of any use of that ear. However, the fact that the auditory nerve had retained its integrity was established by a careful application of the hearing tests. He therefore cut away the scar tissue sufficiently to obtain a channel of nearly the natural size. There was only a slight discharge following the operation, and when the patient left the city for his home, two weeks later, his hearing in that ear was good for ordinary conversation. The result showed that the drum and auditory nerve had been uninjured by the accident, and nothing was needed to restore the usefulness of the organ beyond opening the door for the admission of sound. Case II.—A girl, eight weeks old, was brought on October 10, 1885. There was a congenital deformity of one auricle, and absence of the external auditory meatus of the same ear. The auricle was rudimentary and doubled forward upon itself. It appeared shrunken and pinched, and had a large, hard nodule and several indentations in that part of the helis that corresponds to the keystone of an arch. At the point where the canal ought to have been there was a depression, or cul-de-sac, that yielded to pressure and imparted an impression as if there were an opening in the bone beneath Four months later, careful tests led him to believe that the child could hear with that ear. He operated to correct, as far as possible, the deformity of the auricle and to ascertain if there were any bony meatus. On cutting down into the depression where the canal should have been, he found nothing but a depression in the bone. No bony canal could be found, and he did not consider that further operative interference was justifiable. A sufficient opening was maintained, however, to give quite a respectable appearance of an external meatus. Case III. was an infant, fourteen months old, healthy and apparently normal except in respect to one ear. There was no opening where the external canal should have been, and, although the patient seemed to hear on that side. the parents were unwilling that an exploratory opening should be made. Case IV. was that of a locomotive engineer, thirty-two years old. At the age of three years he was run over by a waggon that detached the auricle and tore off a part of the cheek. The auricle was stitched over the meatus and completely closed it with dense fibrous tissue. Patient stated that he had never since been able to hear with that ear, but the tests showed that the nerve was sensitive to sound. About ten years ago he suffered intense pain in this ear for two weeks. There followed a purulent discharge from a pin-hole perforation in the adventitious tissue at the highest point of the mouth of the meatus. The discharge had continued ever since, being copious and malodorous. The exit for pus was so minute that accumulations produced considerable pain. He operated to open up the meatus, and found it filled with tough cicatricalt issue for about three-fourths of its depth. After opening up the canal, and cauterizing it with chromic acid, he inserted a vulcanized rubber tube and retained it in position with antiseptic dressings. After the operation patient could hear a sixty-inch watch one inch, and ordinary conversation at a distance of eleven feet. After several treatments with the Eustachian catheter and topical applications, the patient resumed his occupation. When he returned again the canal had contracted, and granulations had extruded the rubber tube by one-half its original insertion. He then curetted and cauterized the canal and recovered the lost ground. Subsequently, however, the same experience was repeated and the canal was allowed to close, but by this time the discharge had diminished to a few drops in the twenty-four hours, and the foul smell had disappeared. He had already been dilating the old perforation. Through this he could pass a probe upward into the mastoid cells and inward parallel to the roof of the external meatus to

the tympanitic. He proposed a more radical operation for the excision of all the occluding tissue, which would enable him to discover and remove any carious bone that might be present, but the patient was so well satisfied with the almost complete cessation of the discharge that he refused, and returned to his vocation. After dilating the original opening, it was found that he retained his hearing nearly, though not quite, as well as it was through the vulcanite tube. The remarkable circumstance in this case is that the perceptive apparatus and the conducting mechanism should retain their functions after twenty-nine years of apparent disuse.

Opthalmology.

RECENT PAPERS.

868. Seggel, Dr.—On the Connection between Myopia and the Shape of the Orbit. (*Archiv fur. Ophthalmologie*, 1890, ii., pp. 1-30.)

869. Schœler, Prof.—On the Treatment of Detached Retina by Iodine Injections into the Bulb. (*Berliner klin. Wochenschr.*, Aug. 25, 1890.)

870. Erand, M.—On the Non-Specific Nature of the Gonococcus.

Art. 868. *Seggel on the Connection between Myopia and the Shape of the Orbit.*—Among the many theories of the mode of production of myopia, none in recent times has attracted so much attention as that of Stilling, who attributes it to the shape of the orbit, and especially of its facial orifice. A full account of all the facts on which he based this theory will be found in papers which he published in 1887 and 1888 (*Utersuchungen über die Entstenung der Kurzsichtsigkeit Schädelbau und Kurzsichtsigkeit*), abstracts of which were published in the Medical Recorder. Briefly the theory is as follows:—The myopic form of the eyeball is caused by frequent or constant pressure during the period of growth. That this pressure is caused by the oblique muscles, and varies (*a*) with the direction of the reflected tendon of the superior oblique, which is very variable; (*b*) with the position of its pulley; other things being equal, the lower the pulley the greater the pressure. He considers that the position of the pulley may be inferred from the height of the highest part of the superior border of the orbit. To ascertain the connection between this and the existence of myopia, he measured the height and breadth of a large number of orbits, the proportion between them he called the height-index; this, he stated, was in the overwhelming majority of cases of myopia lower than in non-myopes. In commenting on these papers at the time, we pointed out that they would be of extreme importance should further observations confirm the statements made; at the same time the unavoidable inaccuracy of such measurements on the living subject, and the possible influence of other unknown factors, justified a certain amount of caution in accepting the theory. The author of the present paper has given the results of the measurements of no fewer than 1.900 orbits on the living subject, the refraction being also estimated in every case. At first sight the results seem hardly to agree with those of Stilling, but on further examination they will be found to confirm his main contention in a remarkable manner. The examinations included 937 adults, 691 between the ages of fifteen and nineteen, the remainder being between ten and fifteen. This is an important point to bear in mind, for the form of the orbit changes with advancing years, and changes in a different way in different kinds of refraction,—a fact which was not brought out in Stilling's paper, but which the author's figures seem to place beyond doubt. Taking the results as a whole, they show that a low orbit (index less than 80) is found more often in myopes than in others. The difference, however, is only 19·3 against 14 per cent.; very different to Stilling's result (54·2 to 5 4 per cent.); while a high orbit (index over 85) is slightly more frequent among non-myopes than among myopes. On the other hand, taking all the myopes together, the high orbit is much more common than the low or medium (54·8, 19·3, and 25·9 per cent.) Nor did the author, like Stilling, find among the non-myopes a large per centage of very high orbits. So far, then, the results were distinctly unfavourable to Stilling's theory. Taking, however, the myopes alone, and comparing the measurements of students and the adults, it was at once found that a low orbit was much more common among the former, and that there was a very decided increase in high orbits among the adults. It then became a matter of importance to ascertain whether, in individual cases, any connection could be traced between the change in refraction and the form of the orbit; 734 subjects were examined in all, and the change in refraction noted in a period of about nine years. Dividing these into high orbits (index over 85) and low orbits (under 85), it was found that among the former 30 per cent. became myopic, and among the latter 5·185 per cent. A comparison of measurements of the same subjects at an interval of six years brought out some interesting results, which showed that the growth of the height and of the breadth of the orbit were very different,—a fact that would considerably vitiate the conclusions drawn from the height-index. As regards height, it was found that, from ten to eighteen years, the growth in myopes was 5·41 millimètres, in emmetropes 2·97, and in hypermetropes 1·5 millimètres. The result of this is, that while in young myopes the orbit is perceptibly lower than in non-myopes, the difference becomes less up to 13, when no difference is perceptible, and then the great increase in the height of the myopic orbit carries it ahead. The breadth, on the other hand, increases, at the same rate in all conditions of refraction. Till puberty it increases less rapidly than the height, but after this its growth is more rapid in males. The actual height of the orbit in myopes, of nine or ten years of age, is on an average 3 millimètres less than in hypermetropia, and 2 millimètres less than in emmetropia. Both low orbits and myopia are at this age more common in males than in females, so that, although in many points Stilling's observations are not confirmed, yet the main point in his theory receives strong confirmation. The great increase in the height of the orbits in myopes after puberty is of interest, and is attributed by the author to the effect on the walls of the increased size of the globe.

W. Adams Frost, F.R.C.S.

869. *Schœler on the Treatment of Detached Retina by Iodine Injections into the Bulb.*—This paper was read before the Berlin Medical Society a short time since. The author had previously reported five cases, and now raises the number to twenty-six in all. Two were treated with Lugol's iodine solution, two with a solution of sodium salicylate (1 in 3), and twenty-two with tincture of iodine. In four, perfect cure was

hopeless from the first, but partial adhesion and subsidence of inflammation were obtained. Three cases were unfortunate, owing to hæmorrhage; in one of these there was a technical mistake. In five cases the result is insufficient (in two the treatment is not finished). In six cases temporary reposition of the detached retina occurred. The number rises to nine, if we include two cases, in each of which this occurred twice, and one case which afterwards healed completely, and is, therefore, put into the next category. In all these cases the reactive inflammation was too slight. In two cases there is steady progress to a permanent cure (one was treated with salicylate injection). In six cases there is permanent cure, with perfect re-adhesion, in two of these cases of ten months', in three of eighteen months' duration already. Separating the four incurable cases, and those treated with sodium salicylate (two), and one with Lugol's solution, and two still in hand, there are six cases of perfect reposition out of seventeen treated.

E. J. Edwardes, M.D.

870. *Erand on the Non-Specific Nature of the Gonococcus.*—The following are M. Erand's conclusions on this subject:—(1) There exists in the urethra of healthy men a staphylococcus which is capable of producing orchitis. (2) This microbe, with the same characters as regards both morphology and reaction, is found always in adolescence, in childhood, and in the new-born babe. (3) This saprophyte microbe presents the same characters as the microbe found in gonorrhœal orchitis—nay, even as the gonococcus itself—which is quite capable of cultivation. (4) There is reason for supposing, if not for coming to the conclusion, that all these microbes are one and the same parasite which exists as a saprophyte in the normal urethra, and which is capable, under the influence of conditions which are at present unknown, of giving rise to gonorrhœa.

Toxicology & Medical Jurisprudence.

RECENT PAPER.

871. Richardson, Dr.—On Acute Poisoning by Chloral Hydrate. (*The Asclepiad*, Aug., 1890.)

Art. 871. *Richardson on Acute Poisoning by Chloral Hydrate.*—Dr. Richardson relates a case of poisoning from an over-dose of chloral, which occurred more than twenty years ago, and was the first case of the kind ever seen in England. The author was called to see a gentleman, who was known to have taken a large dose of chloral hydrate, in a state of complete insensibility. Dr. Richardson at this time had been specially engaged in watching the action of the drug in large doses on warm-blooded animals, and he had noticed that death never took place until fluid secretion was freely thrown out into the bronchial passages, producing what he termed *hydrops bronchialis;* and he had further observed that hydrops bronchialis could be prevented by the simple process of keeping the narcotized animal in a high temperature. Acting on this knowledge, Dr. Richardson proceeded to treat his patient in the following manner:—He was placed in a room with a large fire; bottles of hot water were placed all round his body within the bed, the warmed air from which being allowed to escape freely over the face; whilst sulphuric acid, in open beakers, was set in different parts of the room, to absorb water from the atmosphere. No other treatment was employed, except that the patient was fed with milk through a tube passed into the stomach by the nostril. A change was soon noticed in the condition of the lungs, and after six hours' sleep recovery commenced, and continued so rapidly that in thirty-six hours the patient was completely restored. Dr. Richardson describes the symptoms of acute and chronic poisoning by chloral. The chronic symptoms are—sleeplessness, unless the narcotic be taken in very large doses; great mental irritability and muscular prostration; uncertainty of movement, with tendency to fall forward; caprice of appetite and frequent nausea. The urine, in extreme cases, contains albumen, and the bowels are commonly constipated, the evacuations being white and hard. Continued for a long time, the symptoms from chloral approach very near to those of purpura, without, however, being attended with loss of blood. The body becomes emaciated, the breath becomes not only ethereal, but heavy, and almost offensive; and the surface of the body becomes covered, on the back and on the fore part of the chest especially, with patches of purpuric rash, but resembling more the hue of a syphilitic eruption. The craving for chloral, after it has been withdrawn, is neither so intense nor so lasting as that for alcohol, opium, and morphia, nor are the symptoms so severe. Probably the reason for this lies in chloral hydrate being rather an unstable compound; it is decomposed in the body into chloroform and formate of soda, each of which is readily disposed of.

Richard Neale, M.D.

Reviews.

Article 872.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES.*

These portly volumes, containing the retrospect of advances made in the various departments of medicine during last year, form a fitting sequel to the admirable compilations of preceding years. Each year, as they issue from the press, one's wonder increases at the punctuality and precision with which the work is done. The task in the present instance appears to have been rendered exceptionally arduous, owing to the fact that just in the thick of the work over half the editorial staff were smitten down with that impartial foe—influenza. In spite of this drawback, however, the delay in its appearance did not exceed twenty days, and this fact speaks wonders for the energy and perseverance of the invalid contributors.

Various improvements have been introduced into the present issue, mainly by the creation of special departments on subjects heretofore considered under special heads; but in several instances sections have been modified, so as better to fulfil the requirements of the general practitioner.

Vol. I. commences with an able *résumé* of recent researches and observations on the etiology and dissemination of pulmonary tuberculosis, and these chapters possess a peculiar interest in view of the discussion which is pending in respect of the propriety of excluding from the market the bodies of animals suffering from localised tuberculosis at the time of their death. The evidence forthcoming appears to be conclusively in favour of the precautions enjoined by sanitary authorities generally, in refusing to allow of the sale of milk from, or the meat of, tuberculous animals. Then we come to the dissemination of the disease by diseased human beings, and the means of obviating what experience has shown to be a tangible risk to those who have to inhabit, or travel, with persons whose sputa is heavily laden with the particular bacillus. We then pass on to the methods of treatment which have been recommended in this and other affections of the lungs.

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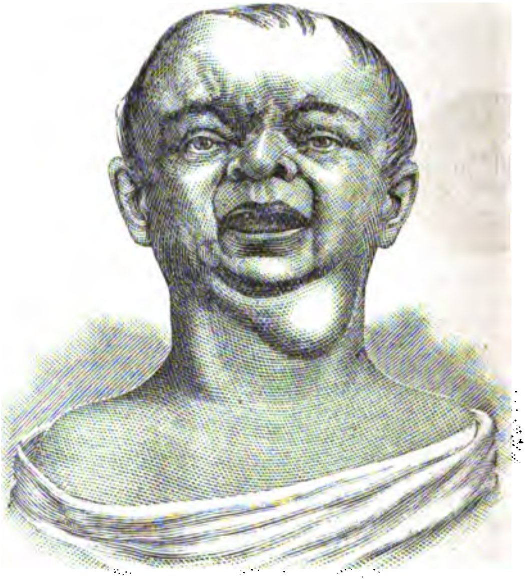
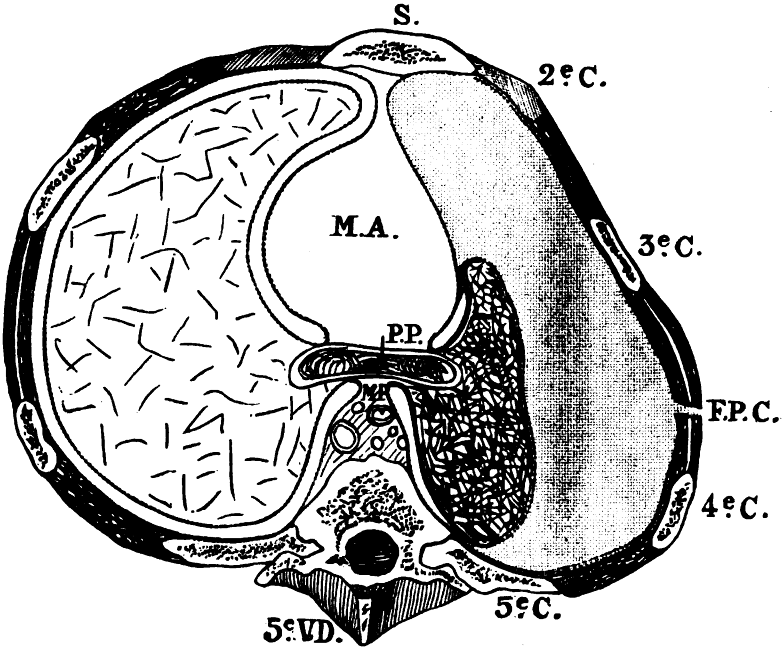
* Edited by Charles E. Sajous, M.D. Five vols. Philadelphia and London: F. A. Davis, 40, Berners Street, W.

Passing over the sections on circulatory disorders and affections of the abdominal viscera, we have an excellent monograph on "Fevers," by Dr. J. C. Wilson and L. S. Solis Cohen, in which the results of the various methods of treatment are carefully analysed. Much of this will be read with interest by the general practitioner, who is apt to get confused by the multiplicity of the rival drugs and plans of treatment. Syphilis has been raised to the rank of a special section under the editorship of Prof. J. V. White, of Philadelphia, and it is replete with information that could hardly have been presented satisfactorily otherwise.

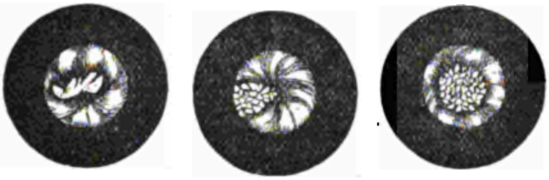
Volume II. is largely devoted to the subject of diseases of the brain and nervous system and affections of the mind, and the section is illustrated by a judicious selection of typical cases, showing the more salient symptoms in particular affections. The major portion of the remaining chapters are reserved for gynæcology and obstetrics, the literature of these subjects always being voluminous. Specialists, who desire to be well posted in the latest views on questions still under discussion, will find these sections invaluable for reference, the more so as the authorities for the statements are everywhere given in such a way as to facilitate that verification of references which is indispensable in order to arrive at reliable conclusions.

Volume III. deals with surgical topics, beginning with the surgery of the brain and nerves. This and the surgery of the abdomen and its contained viscera have been so energetically and successfully worked out that a *compte rendu* of achievements in these directions must necessarily occupy much space, though we may safely affirm that none of it has been wasted. The chapter on the surgery of the thorax contains some very telling woodcuts, of which we select one, showing hernia of the pleura into the neck, and a second giving the section of chest empyema. The section has been made on a line with the fifth dorsal vertebra, and shows the collapsed and inactive lung.

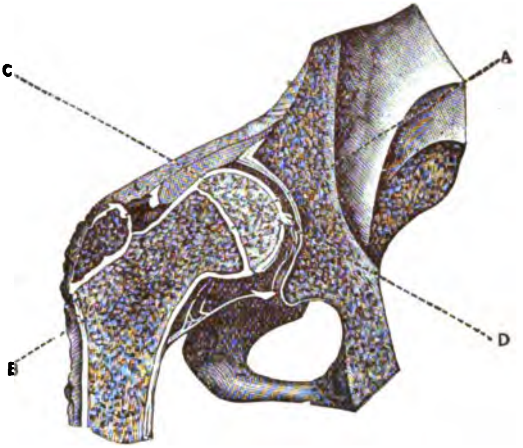




The illustrations in the section on abdominal surgery are extremely numerous, and are, moreover, of large size and of unexceptionable execution. They bear mostly on the various operations for the radical cure of inguinal hernia. In the section on surgical diseases of the genito-urinary tract, prominence is given to the value of endoscopic examination of the lesions. The following illustration is a reproduction of the view obtained in a case of papellomatous urethritis

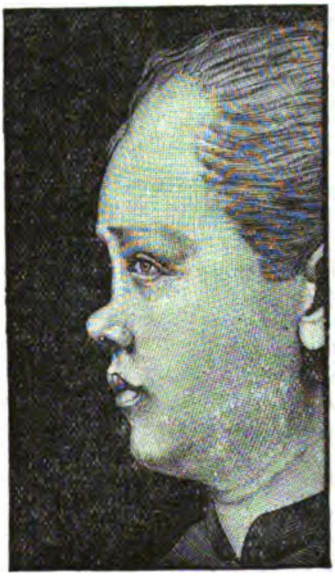


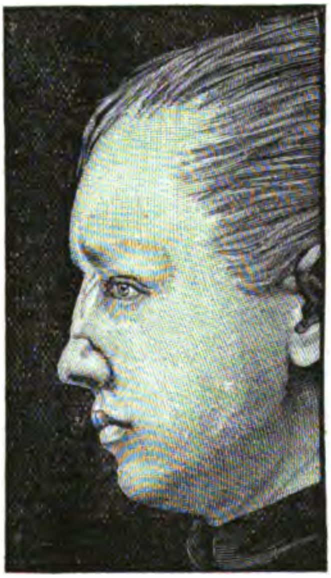
Descriptions of orthopædic procedures, again, are valueless unless liberally illustrated, and the supply of cuts is accordingly abundant. The scope of this section has been much extended, and a good deal of attention is naturally concentrated on the treatment of hip-disease in children. The accompanying woodcut, representing a vertical section through the hip-joint of a child, indicates the direction (A.B.) in which the extension is made in the plan advocated by Wallace Blanchard, and (C.D.) the direction in which the head of the femur is carried by extension in a line with the body.



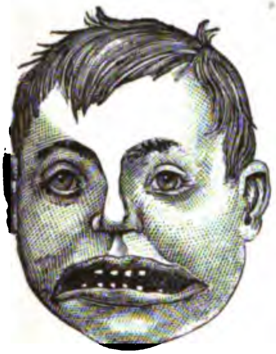
The apparatus devised by different (and differing) authorities in this department are figured; but most of these will be of interest to the specialist rather than to the ordinary practitioner.

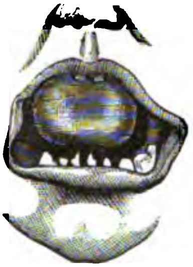
Skipping the sections on injuries to, and diseases of, bones and arteries, we note that the section on oral surgery, edited by Dr. Matas, of New Orleans, contains an able review of the minor surgery of the teeth, limited in extent to the requirements of the general practitioner. In the subsection on facial surgery we are favoured with some very good examples of rhinoplastic operations. One of them, belonging to the category of "cosmetic" operations, is figured below, before and after the operation (König's procedure, by Rotter.)





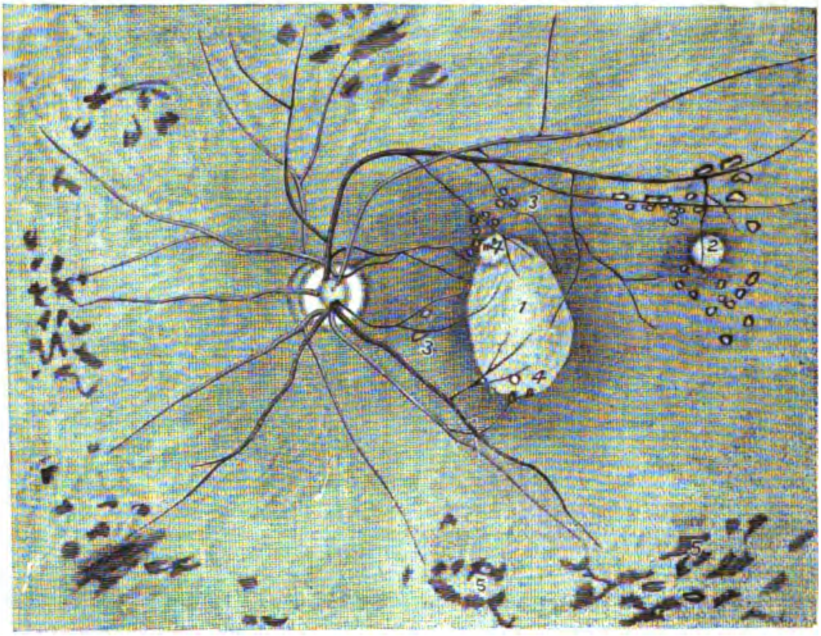
Another is that of a case of macrostoma, operated upon by Billroth, in which the defect was attributed to the pressure of amniotic bands.

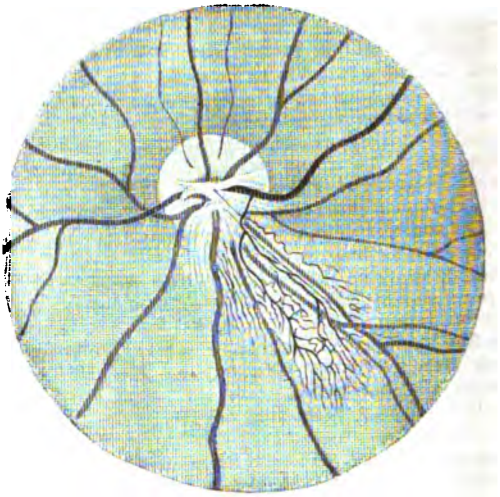




Some beautiful coloured plates (full-page) illustrate the section on "Surgical Mycoses," by Dr. Ernest Laplace, and we then pass on to gun-shot wounds, tumours, and surgical diseases.

Volume IV. is singularly rich in coloured plates, wood-cuts, and lithographs; but as it comprises the sections on diseases of the skin and ophthalmology, this is not to be wondered at. The dermatological illustrations are too elaborate for reproduction, and the same remark applies, with almost equal force, to ophthalmology, which requires colour to be effective. We have selected a cut which illustrates senile degeneration of the retina, by Hirschberg, and another from a case reported by the same author of new vascular formations in the vitreous.





Considerations of space forbid analysis of the remaining sections, most of which are remarkable for the editors' thorough grasp of the subject. It must suffice to say that the present issue is, in many respects, an improvement on its predecessors, and the text, as well as the numerous and beautiful illustrations, fully maintain the previous high standard of the work. We must conclude with a word of praise for the enterprising publisher, who has once more successfully carried through such a gigantic enterprise in such an eminently satisfactory manner.

ARTICLE 873.

Diseases in Children. By ANGEL MONEY, M.D., F.R.C.P., Assistant Physician to the Hospital for Sick Children, etc., etc. London: H. K. Lewis. 1890.

THE author's original intention was to write a work in which would have been "reflected a picture of all contemporary treatment of disease in children." Finding, however, that this would require a "volume of vast dimensions," he abandoned his ambitious scheme, and endeavoured to "arrange a co-ordinate microcosm for the inco-ordinate chaos." Judged by the standard of the daily needs of the senior student and practitioner, to whom the book is addressed, the result is disappointing. When we find that out of these five hundred odd pages scarlet fever, diphtheria, enteric fever, small-pox, and such inconsiderable trifles as chicken-pox and German measles only receive between them some thirty, while cirrhosis of the liver (of the nature of which the author admits he knows nothing special in children) is thought to merit as much consideration as, say, measles, we feel that the "Microcosm," however coordinate, is somewhat out of proportion, and drawing. For a "Practical Work," in a well-known "Practical Series," we think too much space has been allotted to diseases which are neither special to children nor modified by their occurrence in early life, and which could more properly have been left to the "Work on General Medicine," with which the reader is assumed to be already acquainted.

In the prefatory observations we are also told that the "Alpha and Omega of all rational treatment is precis Diagnosis." Diagnosis being, however, a mattee of "clinical skill and sagacity," and "hardly to be acquired from books," our author contents himself by giving only its "outlines." This is a somewhat curious proposition with which to preface a work of this kind, and one which, if admitted, would question its very *raison d'être*. According to this reasoning, then, it would follow that the rational treatment of Infantile Disease, the "Alpha and Omega" of which is precise diagnosis, which in turn is a matter of clinical skill and sagacity, can hardly be acquired from books.

We draw attention to this simply because, after careful perusal, we are constrained to confess it is precisely the absence of any evidence of clinical skill and sagacity, which constitutes the weakness of this work, and deprives it of much of the value it might otherwise have possessed. This is regrettable, because we believe that a handy manual of the clinical therapeutics of the common and characteristic diseases of early life, in which the principles of the recognition of their various clinical types and modalities with their appropriate treatment were adequately set forth, would have supplied a distinct want. This want, we fear, Dr. Money has done little or nothing to meet. How extremely sketchy these "outlines" are, the following extract may serve to show:—"The diagnosis of the bulk of eczematous cases is not difficult. Intertrigo is known by its seat; when the secretion is removed the papillary layer of the skin is seen not to be hypertrophied; its discharge does not thicken linen. Scabies may cause an eczema. Erysipelas with scabs is known by the acute constitutional disturbance, the brawny infiltration." Further on we are told that psoriasis is a slower eruption, with more desquamation and less effusion; its chief seats are the backs of the limbs, where the skin is tougher" (page 278).

As a fair sample of the rough-and-tumble, paradoxical manner it has pleased the author to adopt, we may cite the following:—"All the treatment of pulmonary atalectasis (page 190) may be focussed to the principle of stimulation of the respiratory neuromuscular apparatus; it has to be got to work as thoroughly as possible. The medullary centre may be filliped by mustard baths to the whole body; it may be strengthened by the administration of brandy and ammonia; it may be kept working by voluntary effort in those who possess 'a will.' Torpor of the infant, and especially of the infant whose lungs are partly solid, aids in the maintenance of the feeble respiratory power. Of great value are:—Emetics, embrocation, and inversion of the infant, so as to keep plenty of blood in the head. These measures, directly or indirectly, arouse the respiratory centres. For other treatment see the congenital form and the paragraph on asphyxia neonatorum. A knowing child should be instructed in voluntary efforts at deep inspiration. Crying is a good sign of improvement, and will further improve the respiratory powers. Our focus still in view, the necessity is great for keeping the air warm, fresh, and free from all impurity, for maintaining the corporeal surface at a constant adequate temperature, and for stimulating the body by efficient nourishment and stimulants. Cold devitalizes the body and respiratory centre, and may excite more catarrh, and collapse. Defective feeding allows the respiratory centres nothing to energise themselves with. Defective oxygenation increases the depth and frequency of respiratory nerve-discharges; and," he facetiously concludes by remarking, "that the disadvantages of asphyxia outweigh the advantages."

The space at our disposal forbids us passing more than a general criticism on the book. We note, however, on page 127, the following, apropos of the treatment of the Convalescence of Acute Rheumatism:—"Relapse and recurrence must ever be in the mind of the practitioner. The value of cold douches in averting this tendency may be remembered." We think the practitioner will, in the majority of cases, be better advised in forgetting it—if he ever knew it.

On page 44 we are told that the first thing to do for the stomach, in any case "of dyspepsia, is to empty it," a statement we think requiring some qualification.

Formulæ of the usual cut-and-dried type abound in embarrassing profusion, and will, we suppose, find favour with some readers. In certain cases we think the dosage is too high, as when ♏iij. liquor strychninæ is recommended "to lead to recovery of power in the intestinal musculature" of a child of ten (page 52), and in the case of the infant, aged twelve months, with convulsions, who is "taking a minim and a-half of liquoris strychninæ three times a day" (page 404).

We cannot congratulate the writer on his literary style, which is often slovenly and ambiguous. We give a few examples of the gems of composition with which these pages are studded:—"There are few diseases which are predisposed to by perfect health. Typhoid fever is said to be one, and scarlet fever another. Diseases *are*, however, always more easily dispersed when the body *was* previously healthy. The same considerations apply, indeed, all round the nervous system. Isolation of application is like force brought to bear at one point—it seems more powerful, proves often more striking (page 409). Again, "The cerebral cortex requires treatment. Misery increases bronchitis; happiness increases health and lessens bronchitis. A little alcohol may promote happiness.

A new toy or other fascination, provided the digestion be good, will also promote the health of the cerebral cortex" (page 179.) [Are we to infer that old toys are not digestible?] "The child should be happy, for happiness induces better action and physiological hyperæmia of the cortical centres; such a state must tend to help a return to health (page 412). We wish the author had a tithe of the solicitude for the health of the cerebral cortex of his readers, that he evidently has for that of his bronchitic patients.

S. Mackew, M.D.

Article 874.

Micro-Organisms, with special Reference to the Etiology of the Infective Diseases. By Dr. C. Flugge, Professor and Director of the Hygienic Institute at Göttingen. Translated from the second and thoroughly revised edition of "Fermente und Mikroparisiten," by W. Watson Cheyne, M.B., Surgeon to King's College Hospital. With 144 Drawings. London: The New Sydenham Society. 1890.

The date of this very important work of Professor Flügge's is 1886. Since then a considerable increase has been made to our knowledge of micro-organisms and their relations to disease, and as the number of workers in the field of bacteriology is continually on the increase, it may be reasonably expected that our information will likewise proportionately extend. Naturally then, since the science and art of bacteriology is still young, no book, however exhaustive, can be considered as anything more than a basis or introduction to the subject. Such a basis, however, is admirably supplied by Professor Flügge's work, so carefully and adequately translated by Mr. Watson Cheyne, and published by the New Sydenham Society. It is a book that may be very cordially recommended to anyone wishing to obtain a rational idea of the workings of micro-organisms, as well as to bacteriologists. The first edition of the work formed a part of the *Handbuch der Hygiene*, edited by v. Ziemssen and v. Pettenkofer, but the second edition has been much added to, and in great part re-written. The author states in his preface that he was guided by two leading ideas in the preparation of the edition before us, viz., to supply a practically useful classification of bacteria, without attempting a scientific classification, and to employ the increasing knowledge of the forms of micro-organisms, their mode of life, their relation to their surroundings, their transportability, and the mode of their entrance into man, to explain the mode of spread of the infective diseases, more especially of cholera. The work is divided into eight parts.

In Part I, the progress of our knowledge with regard to the ferments and micro-parasites during recent years is reviewed and the gradual development of the germ theory is traced, the objections to it being considered, whilst the methods adopted to prove the *rôle* of micro-organisms as exciters of disease, especially those used by Koch, are described. Part II. is concerned with the morphology and classification of micro-organisms. This does not pretend to be complete or exhaustive, and the reader is referred to other works, *e.g.*, those by Frank and De Bary for details, especially with respect to the true fungi. For all ordinary readers, however, Flügge's epitome even of this will be found ample. When we come to the fourth class of fungi, the so-called Schizomycetes, Fission Fungi, or Bacteria, we cannot but be highly satisfied with our author's succinct description of their general morphological characters, methods of propagation, and the characterizations of their growth. The methods of isolation and cultivation are fully described, and the diagnostic points in the cultures, both puncture and stroke, are shortly, but adequately, commented upon.

In the next section a classification of bacteria is given, together with the distinctive characters of the different classes. Flügge speaks of (1) micrococci, (2) bacilli, (3) spirilla, and (4) fission fungi with variable vegetative form. After this comes a careful description of the various micro-organisms pathogenic in man and in the lower animals, and also of the saprophytic bacteria. This occupies about a third of the whole work. After the description of different species of micro-organisms of each of the four classes, a key to the diagnosis of the different species is given, which is really a summary of the characteristics of the class, and will be found to be very useful. Great stress is laid upon the characters and life-history of the *staphylococus pyogenes aureus* and others of the *micrococci of wounds*, the *bacillus anthracis*, the *bacillus typhus abdominalis*, the *bacillus tuberculosis*, the *spirillum choleræ Asiaticæ*, and of others, the life-histories of which are particularly interesting for their close connection with diseases in the human subject, about fifty pages being devoted to the consideration of the cholera-germs alone.

In Part III. the biology of bacteria is treated of, the conditions of their life, and of spore-formation and germination. Part IV. is concerned with the vital action of the lower fungi, of which the account of the products of their growth, *e.g.*, Ptomaines, ferments, and colouring material, is particularly interesting. From a physiological point of view, too great stress can hardly be laid upon this subject, the production of complicated chemical substances containing nitrogen, which may, or may not, be poisonous, and of digestive ferments of every recognized kind by micro-organisms. Part V. is devoted to the consideration of the conditions affecting the death of the lower fungi, disinfection and antiseptics, a full description of the work which has been done in the direction of the attenuation of virus, with the bacilli of fowl-cholera, symptomatic anthrax, swine-erysipelas and of rabies, being given. Part VI. is concerned with the question of the distribution and habitat of the bacteria; and Part VII., with the mode of the spread of the infective diseases, most important subsections treating of (1) the sources of infection, (2) modes of transport, (3) seats of invasion, (4) individual predisposition, (5) acquired immunity and protective innoculation, (6) local and seasonal predisposition to infective disease, and (7) the most important prophylactic measures against the spread of infective diseases. The last section is an admirable epitome of the method of disinfection. The last, or Part VIII, of the book is devoted to methods of investigating bacteria; it is very short, occupying only thirty-two pages, and is only to be considered as an introduction to this part of bacteriology.

From the above sketch of the plan of the book, and of its contents, it will be understood that every question which has hitherto arisen in connection with the subject whereof it treats, is touched upon; in fact, the book is a very able discussion of the whole range of bacteriological science. Its clearness and want of ambiguity reflect great credit upon the able translator, Mr. Watson Cheyne. It is no light matter for anyone to undertake the mere translation of such a long and highly technical treatise; but this is a great deal more than a mere translation, and we can certainly do no less than very cordially thank Mr. Cheyne for the time and trouble he must have devoted to the production of so admirable and readable a work.

VINCENT D. HARRIS, M.D.

ARTICLE 875.

On Treatment by Suggestion. By DR. TUCKEY.

DR. TUCKEY has published a pamphlet in which he describes in a few pages what is known as the Nancy treatment of diseases by hypnotic suggestion. Dr. Liébeault has practised this method for many years, and has obtained some very wonderful results. On a patient paying his first visit, he is directed to sit down and watch the treatment being applied to others; this gives him confidence, and arouses that imitative faculty which is so active in childhood, and is never lost throughout adult life; when his turn comes, he is told to take his place in an armchair, and to make his mind as much a blank as possible—"to think of nothing at all,"—and to fix his eyes and attention on some special object; almost anything will do, from the operator's face, or hand, to a mark on the ceiling or the pattern of the carpet. Then the phenomena which attend the on-coming of natural sleep are gradually "suggested" to him: "Your sight is growing dim and indistinct; your eyelids are becoming heavy; a numbness is creeping over your limbs; my voice seems muffled to you; you are getting more sleepy; you cannot keep your eyes open." Here the eyes close of themselves, or are closed by the operator, and it is generally found that the patient is indeed asleep. About two minutes of this "talk about sleep" will usually produce the hypnotic effect on a new patient; and on subsequent visits even less time is required. The patient being now more or less influenced, Dr. Liébeault proceeds with the treatment proper; this consists in directing the invalid's attention to the part affected, and suggesting an amelioration or disappearance of the morbid condition and symptoms. This suggestive method is especially applicable to chronic complaints. Rheumatic and gouty pains often yield to it, as do also many diseases of mal-nutrition, such as anæmia and general debility. In derangement of the functions in women it acts very beneficially, both in checking excessive loss and in promoting a proper flow; also in relieving or curing periodic sufferings of all kinds. In chronic constipation and diarrhœa it has excellent effects, and it is extremely useful for cramp from the over-use of certain muscles, such as is commonly found among writers and telegraph clerks. It is very successful also in some cases of old-standing paralysis, and especially so in the infantile variety. In cases of "railway spine," and of disorders resulting from shock and concussion generally, it affords hope of relief and cure. There is no question of the value of suggestion in the treatment of such nervous conditions as insomnia and hysteria, and of such diseases as require, above all things, mental calming and repose. It is in the so-called "neuroses" that suggestion obtains its most brilliant successes—in functional epilepsy, St. Vitus' dance, asthma, palpitation, nervous headache, spinal irritation, neurasthenia, ovarian pain, and the many forms of dyspepsia. The pamphlet is well worth the careful study of every medical man, and it is written concisely and clearly, so that anyone may grasp the subject in a very short time.

RICHARD NEALE, M.D.

ARTICLE 876.

Army Medical Department Report for the Year 1888. London: Harrison & Sons. 1890.

THE evidence of sickness in the army, as indicated by the Report of the Medical Department for 1888, is of a striking character, since it shows that out of a total strength of 198,851 white troops at home and abroad, there were admitted into hospital, in the year in question, no fewer than 193,223, or an average of 971·7 per thousand. In the same time the deaths numbered 1,845; there were invalided home from foreign stations 2,078; discharged as invalids, 2,776; and the number of men constantly non-effective from sickness reached 10,715. In the United Kingdom even, out of a total of 71,874, there were admitted to hospital treatment 55,518, the deaths being 414; but this shows an improvement of 50 per thousand on the preceding year. although the death-rate, as compared with the same period, shows an increase of ·39. Among infectious diseases small-pox caused one death, the number of cases of the affection admitted being 14; scarlet-fever is credited with 237 admissions and 3 deaths; measles, 176; enteric fever, 126 admissions and 34 deaths—a mortality of 27 per cent. Syphilis naturally supplies an exceedingly heavy sickness-rate, the numbers admitted for primary disease being 6,737; for secondary, 4,095; for simple venereal ulcer, 2,742. Gonorrhœa claimed 9,268 victims, so that the total admissions in the United Kingdom on account of venereal disease, in one or other form, reached 22,842, the number of men constantly inefficient from this cause being 1,850. An interesting fact brought out in the Report is to the effect, that sickness-inefficiency among men in camps is almost identical with that shown by troops quartered in towns, but the death-rate is decidedly lower in camps than in towns. The Report gives a very considerable amount of instructive and interesting information, under the headings of the various disease-groups, both in relation to troops stationed in the United Kingdom and to those quartered abroad.

A number of appendices are included in the volume containing the Report, the first being a report on the progress of Hygiene for the year 1889, by Surgeon-Major Potter; and with this are given several separate accounts of experiments with, and analyses of, drinking-water, &c. Brigadier-Surgeon Godwin gives a list of operations performed at Netley in 1889, and a brief account of the more important. The same author contributes a report on the military medical exhibits in the Paris Exhibition, the article being enriched with numerous figures descriptive of the most useful forms of French ambulance waggons. Surgeon Salvage describes, in Appendix IV., two cases of enteric fever with hyperpyrexia successfully treated by cold bathing; and Surgeon Berryman, a case of perforation of colon. Several other interesting cases are also narrated in the appendix.

ARTICLE 877.

The Journal of the Leprosy Investigation Committee. Edited by P. S. ABRAHAM, M.D., Medical Secretary. No. 1. August, 1890. London: Macmillan & Co.

THE introductory number of this Journal, which we understand is to be published quarterly on behalf of the National Leprosy Committee, appears to be part of a scheme for the preliminary investigation of the whole subject of leprosy, which is being undertaken by the committee. It is proposed to collect by correspondence as much information as possible, and to print the results, in full or in abstracts, in forthcoming issues of the Journal. The present number contains a list of the officers of the "National Leprosy Fund," and an account of the origin of the fund, and of the dinner given in its aid in January last, with the speeches of H.R.H. the Prince of Wales. In response to the request of the Secretary, several gentlemen, who are authorities on leprosy, have contributed remarks and suggestions as to the proposed investigation, abstracts of which we publish elsewhere. Abstracts of some recent debates, reports, &c., on leprosy, then follow, viz., (1) a communication by Dr. P. S. Abraham to the Epidemiological Society of London in January last. (2) The debate on Dr. Bakewell's paper on the cure of leprosy, at the Royal Medical and Chirurgical Society, March, 1890, "A Note on Leprosy in Fiji," from which it seems that the disease is more prevalent among the natives than has been supposed. (3) An abstract of Dr. H. Ridenstein's late report on leprosy in Cyprus, wherein the author states that he is more than ever convinced that the direct cause of leprosy is simply and solely due to the inoculation of the virus of a person affected into another up to that time free; he is quite alive to the fact that the absolute seclusion which he would like to see enforced involves mountains of difficulty. (4) Abstract of Dr. Tutz's report to the present President of the Board of Health, Honolulu, in which some important particulars are given, especially in regard to treatment. An extensive bibliography of leprosy is added by the editor, apparently almost complete for the last ten or twelve years, and between four hundred and five hundred authors referred to. The Journal concludes with a map, showing the distribution of the disease throughout the world, and a list of the principal Leper Asylums. The condensed epitomes given above of the views of the various contributors to this number of the Journal will illustrate the wide differences of opinion which exist, and the need there is for the comprehensive investigation proposed. Copies of the Journal are to be sent to a large number of the officials of Leper Hospitals, and to some others who may be able to throw light upon the subject. As the result, we may expect, in the near future, a considerable advance in our knowledge of the disease.

ARTICLE 878.

Dr. Blaxall's Report to the Local Government Board upon an Outbreak of Diphtheria at Berkhampstead, Herts, and upon the Sewerage of the Town. London: Printed for H.M. Stationery Office by Eyre and Spottiswoode; and to be purchased either directly or through any bookseller from Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C. Edinburgh: Adam and Charles Black, 6, North Bridge. Dublin: Hodges, Figgis, and Co., 104, Grafton Street.

THIS report deals with an outbreak of diphtheria, practically limited to the Grammar School, Berkhampstead, and the sewers of the town. The earliest case mentioned is that of a boy, a day scholar, living at home in a suburb of Berkhampstead, who stayed at home on September 24th, affected with throat illness; his two brothers kept on attending school until October 7th, and the other till October 19th, notwithstanding the fact that the mother of these boys was pronounced to have diphtheria on October 9th. This possible source of contagion in the school is considered by Dr. Blaxall to be the origin of the epidemic; he rather attributes the origin to the school itself, the poison being introduced by some unrecognised case at the re-opening of the school. Cases of throat illness continued to arise throughout the end of September, October, and November; but it was not until December 2nd that definite diphtheria occurred at the school. Between that date and December 14th about a dozen cases of well-marked diphtheria occurred, so that the school was dispersed on that day, and the epidemic was at an end at Berkhampstead. There was no diphtheria in the Board or National Schools, or in the town otherwise, from which circumstance Dr. Blaxall absolves the sewers from being the cause of the epidemic; but he does not absolve the Local Authority from the blame due to them owing to the condition of the sewer, which he describes as "utterly unfitted for the purpose of carrying off sewage; it permits leakage and favours deposit." Dr. Blaxall also points out the danger to health if such a sewer, should typhoid fever or cholera gain admittance to the town, and calls upon the Authority to put their sewer into order.

ARTICLE 879.

Special Report on a Recent Outbreak of Small-Pox in Congleton. By MEDICAL OFFICER OF HEALTH to the URBAN SANITARY AUTHORITY.

THIS Report has been issued in a pamphlet containing about thirty pages, and refers to a small-pox outbreak of ten cases, mention also being made of seven cases which occurred some two months earlier. The greater part of this report is taken up in maintaining the thesis that more than one vaccination-scar is unnecessary, or in his own words, "a single scar of the most minute character merely indicates the fact of vaccination, and a greater number nothing more." Upon his seventeen cases, Dr. Davidson builds up this theory, and runs a tilt at Dr. Barry's Report on "Small-Pox at Sheffield," which is based upon more than six thousand cases, and blaming him with using his figures to produce a false impression. For himself, he refers to certain tables in Dr. Barry's Report, which refer to certain sub-districts, but omits all reference to tables of other districts which are not favourable to his views, in order to show one or two cases which support his theory. Dr. Barry's figures, relating to the effect of one or more vaccination-scars upon small-pox mortality at the Winter Street Hospital, deserve mention (Report, p. 212). No primary vaccination cicatrix, or one cicatrix only, 95 cases: mortality, 13·7 per cent. Two primary cicatrices, 259 cases; mortality, 9·3 per cent. Three primary cicatrices, 372 cases; mortality, 5·7 per cent. Four, or more than four, primary cicatrices, 99 cases; mortality 2 per cent.* Dr. Davidson treated this outbreak with rigour and ability, carrying out isolation and disinfection in such a thorough manner, that the outbreak rapidly came to an end, and upon the practical part of his duties we congratulate him.

ARTICLE 880.

A Manual of Anatomy for Senior Students. By EDMUND OWEN, M.B., F.R.S., Surgeon to St. Mary's Hospital, etc. London: Longmans, Green, and Co. 1890.

UNFORTUNATELY for most students, anatomy is usually taught and learned as a subject separate from, and independent of, surgery, and nothing inspires more terror to the candidate in surgery than the subdivision of so-called surgical anatomy—as though anatomy had any other than a surgical interest. For the student to derive the full complement of benefit from his knowledge of anatomy, it must be brought into closer association with surgery, and the two must be indissolubly connected in his mind. It was doubtless this feeling that prompted the author to undertake the task of preparing a manual of anatomy in its medical and surgical bearings. The mere scholastic departments are put aside, and we have in the work before us a concise and eminently readable account of the practical import of anatomical facts. The aim and scope of the work are, therefore, very commendable, and the style in which the subject-matter is handled is not less so. As each fact is given, its application to the treatment of possible contingencies is explained, and the author has succeeded with his crisp, laconic style in investing the subject with an interest of its own. The work cannot fail to be popular, for it appears to fill a lapsus. The woodcuts, which are fairly numerous, are, in many instances, quite original, and the remainder have been judiciously selected.

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* Dr. Davidson calls attention to the fact that calf-lymph does not "take" so quickly as humanised lymph, and points out the necessity of performing re-vaccination with recent humanised lymph in all cases of exposure to small-pox infection, if possible.

ARTICLE 881.

Mad Doctors. By ONE OF THEM. London: Swan, Sonnenschein & Co. 1890.

THE author of this smartly written *brochure* has set himself very decidedly to the task of demolishing the theory on which it has been proposed, by a section of the London County Council, to build an expensive hospital wherein insane patients shall undergo treatment with a view to cure. He severely criticises the claims of the professional members of the committee to be considered as high authorities in matters of lunacy, among those so discussed being Mr. Brudenell Carter and Sir J. Crichton Browne. The arguments employed to demonstrate the needlessness of the proposed institution are certainly of much weight, and, backed as they are by the authority of Dr. Clifford Allbutt, who appeared as a witness before the committee, they very effectually dispose of the suggested hospital as an unnecessary and impracticable scheme. The essay concludes with a number of remedial proposals for lunacy reform, including the abolition of the Lunacy Commission, and the appointment of district lunacy inspectors, of consulting physicians, surgeons, and specialists to asylums.

ARTICLE 882.

Ophthalmic Hints. By ST. CLAIR BUXTON., F.R.C.S. Ed.

MR. St. Clair Buxton, assistant surgeon to the Western Ophthalmic Hospital, has written a very useful little book, entitled "Ophthalmic Hints." It is intended for the use of general practitioners who do not consider themselves familiar enough with this special branch of surgery to give an opinion in cases of disorders of the eye; but by the aid of this little book any one can readily distinguish between those cases which are likely to be serious and those which are not. Many a country practitioner can save a patient's sight by using prompt remedies in cases of acute glaucoma, and if they would bear in mind the few hints given by Mr. Buxton much good would result. In London it is very easy to call in the assistance of a specialist, when there is doubt in a case; but in the country a medical man is often solely responsible for treatment, and before he could obtain help the sight might be entirely lost were he not quite up to some of the simple hints that can be gathered from this little volume.

ARTICLE 883.

Practical Manual of the Diseases of Women and Uterine Therapeutics. By H. MACNAUGHTON JONES, M.D., M.Ch., M.A.D., University Professor of Midwifery and Diseases of Women and Children at the Queen's University, etc., etc. Fourth edition. London: Bailliere, Tindall & Co. 1890.

THIS work, which has now reached a fourth edition, is deservedly popular with students, not only on account of the author's lucid style, but on account of the abundance of illustrations and the excellent manner in which it has been published. The present volume contains additional chapters on gynæcological electro-therapeutics, certain renal and venereal affections, and on massage, besides upwards of a hundred new illustrations. Many of the chapters have also been rewritten "under distinguished patronage." We have little to add to the terms of commendation in which we have alluded to previous editions of this work, except to express a hope that the author will endeavour not to exceed the convenient size of the present volume.

ARTICLE 884.

The Constitutional Requirements for Tropical Climates. By Sir WILLIAM MOORE, K.C.I.E. London: J. and A. Churchill. 1890.

IN this useful and interesting little volume Sir William Moore discusses a subject that has the utmost importance to a very large number of his countrymen, but which hitherto has received very little consideration. The topics dealt with in order in the book include—the depressing influences of a hot climate; age; disease and heredity; idiosyncracy; temperament; and sex. The second part of the essay deals with the sequelæ of disease contracted in India, and within a brief space the author has condensed a vast amount of most valuable information calculated to guide the practitioner in his treatment of, and advice to, Anglo-Indians. The work is very suggestive and instructive, and will well repay perusal. C. H. WADE, M.D.

ARTICLE 885.

Modern Methods for the Cure of Obesity. By JACQUES MAYER, M.D.

DR. Jacques Mayer read a report before the Medical Society, Berlin, on the cure of obesity, which has been translated into English by Mr. Butcher, and published by Beaumont & Co., 31, Charing Cross Road, in the form of a pamphlet. In it the author discusses the four methods employed at the present time for the treatment of obesity, viz., (1) the Banting cure; (2) the Ebstein cure; (3) the Dancel Œrtel cure; (4) the mineral-water cure. The author considers that the mineral-water cure is the best, and that it can be carried out best at Bath, Karlsbad, Marienbad, Kissengen, and Wiesbaden.

ARTICLE 886.

Practical Chemistry for Medical Students. By SAMUEL RIDEAL, D.Sc. London: H. K. Lewis. 1890.

THIS little volume of fifty-five pages contains a concise series of notes on the tests and chemical reactions of the simple substances included in the requirements of the Conjoint Board in England. Students working for that examination will find sufficient to guide them to a larger text-book, or to remind them of the chief points of their practical course. As befits the scope and aim of this little handbook, it is edited with extreme care. Dr. Rideal's experience as a teacher enables him to gauge with accuracy the requirements of students who are preparing for examination.

ARTICLE 887.

A Directory of Justices in England and Wales appointed under the Lunacy Act, 1890, *to make Orders for the Reception of Private Patients*, 1890-91. By HENRY SUTHERLAND, M.D., M.A. (Oxon), M.R.C.P., B.A. (Cantab), Physician to and Proprietor of Newland's House and Otto House Private Asylums. London: John Bale and Sons, Great Tichfield Street, W.

THE compiler of this Directory of the Justices who have been empowered to make orders for the reception of private patients into private asylums, according to the provisions of the Lunacy Act, 1890, tell us that it had occurred to him that such a list of Justices might be useful, in cases of necessity, to medical men and others to assist them in obtaining the power to prevent a lunatic injuring himself or others. The directory is nearly a complete list of the Justices in towns, counties, liberties, and in Wales, to whom the power of signing certificates has been given, and will be found most useful to those practitioners who are called upon to deal with the admission of lunatic patients (who are not paupers) into asylums. We think that the author was amply jusitfied in publishing the little book, and we commend it to the notice of the profession.

ARTICLE 888.

The Journal of Nervous and Mental Disease. New Series. Vol. xv. No. 9. September, 1890. New York: Rooney and Co., 1329, Broadway.

IN the September number of the *New York Journal of Nervous and Mental Disease* are six original articles:—(1) *Progressive senile Paraplegia*, by Dr. Charles L. Dana, founded upon a case which has been observed in the Montefiore Home, in 1889. Microscopic examination of the cord after death showed degenerative endarteritis with sclerosis, obliteration of vessels causing softening of the anteriorrhons and intermediate gray matter. (2) *Two cases of Syringomyelia*, by Dr. J. A. Jeffries. A very careful account of two cases of the disease, which is defined, pathologically, as "a hole in the spinal cord, extending as a tube up and down for a greater or less extent," usually depending upon the absorption of a more or less dense glomatous tumour. A very interesting account of the condition is added with reference to reported cases. (3) *Cases of Hysteria treated by Hypnotism*, by Dr. S. G. Webber. An account chiefly of two cases, treated by the fashionable method of hypnotism. (4) *A case of fœcal Hæmorrhagic Lesion of the Prepeduncle* (anterior cerebellar peduncle), by Dr. Bannister. (5) *On the germ of a communicable disease derived from a dog alleged to have died of rabies, which retains rabies characters*, by Dr. R. Mollenhauer. A contribution to the bacteriology of rabies. (6) *Acute Myelitis preceded by acute optic neuritis*, by Dr. J. K. Eskdridge. An interesting periscope and other readable matter.

VINCENT D. HARRIS, M.D.

ARTICLE 889.

Diseases of the Nose and its Accessory Cavities. By W. SPENCER WATSON F.R.C.S. Eng., B.M. Lond. Second edition. London: H. K. Lewis. 1890.

SINCE the first edition of Mr. Spencer Watson's book appeared, great advances have been made in rhinology. Numerous important works on the subject have appeared in this country and abroad, and Mr. Watson's book, for a long time almost the only work on diseases of the nose, had become completely out of date. There was, therefore, need for a new edition of the work, with everything brought thoroughly up to date. In the present edition the whole work has been thoroughly revised, much of it has been completely re-written, and a good deal of fresh matter has been added. Dr. Robert Liveing has contributed an article in Lupus Erythematosus, and Mr. A. E. Cumberbatch a chapter on the connection between Nasal and Aural Diseases. Many fresh illustrations have been added.

The first section is devoted to Anatomy and Physiology. The physiology of the olfactory sense is fully dealt with, but perhaps not sufficient stress is laid upon the importance of the nose as a part of the respiratory apparatus. The second section is devoted to general diagnosis. Anterior and Posterior Rhinoscopy are fully described. The following sections are devoted to the various forms of Catarrh, Gelatinous Polypi, Epistaxis, Foreign Bodies, and Ulcerative Affections of the Nasal Fossæ. A new section is introduced on Adenoid Vegetations of the Naso-pharynx. The Diseases of the Accessory Sinuses, Tumours of the Nasal Fossæ, and Naso-pharynx, Injuries and Malformation of the Nose, are all fully described. The book concludes with sections on Anosmia, Reflex and other Neuroses, and on the Mental and Intra-cranial Complications of Intra-nasal Diseases. Mr. Watson's book undoubtedly contains a very complete account of diseases of the nose. It bears evidence of having been carefully revised and brought up to date. The best part of it, we think, is that devoted to the surgical aspects of the subject. The chapters on the rarer diseases are, as a rule, better than those on the more common affections. The woodcuts are of very unequal merits, some being very good, while others are of inferior execution.

New Articles.

CAFFEINE SEIDLITZ-POWDERS are the latest foreign novelty for nervous headache. Each powder contains, in addition to the usual ingredients, 1 grain of caffeine and 10 grains of potassium bromide.

TABELLÆ.

WE have received from *Messrs. Allen and Hanburys* samples of their new manufacture of Tabellæ of insoluble, or sparingly soluble, salts. Our attention having been called to the special care which has been taken to secure the ready disintegration of these tabellæ, we have put them to the test, and have ascertained for ourselves that though the active substances incorporoted therein may be somewhat, or altogether, insoluble, yet, by the special process of manufacture, they promptly crumble to pieces on being moistened. It, of course, is an important point, for unless this requirement be fulfilled, compressed goods may prove as inert as so many pellets of cement. As a natural consequence, the physiological action of the drugs administered in this form is obtained to the full, and the advantages attending this method of exhibiting disagreeable or insoluble remedies are absolute. It is, moreover, unnecessary to crush the tabellæ before administering them, and they may be swallowed whole with perfect confidence. The samples received are well finished off, and conveniently dispensed in flattened metal-capped phials. Messrs Allen and Hanburys claim to have been the first to put up insoluble drugs in this form.

Miscellany.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, CHARING CROSS.—In our *résumé* of teaching institutions in London, we omitted to mention this excellent school for ophthalmic work. The teaching at this hospital is arranged with especial regard to the requirements of senior students and practitioners. With the exception of the Lantern Lectures on the Fundus, there are no courses of formal lectures; but the teaching is conducted in classes not exceeding eight members. These embrace the subjects of the estimation of refraction, the use of the ophthalmoscope, and demonstrations of the more common ocular affections. The material available for clinical instruction consists of about 8,000 new out-patients, and about 330 in-patients annually. Once a month a clinical evening is held, at which ophthalmoscopic cases, which are typical or of unusual interest, are shown.

THE jury of the Edinburgh Exhibition have awarded the diploma of honour and gold medal for malt and ales to Messrs. Bingham-Cox and Co., Kingsbury Brewery, St. Albans.

MESSRS. JOHN DEWAR & SONS, of Perth and London, the well-known distillers, have been awarded the gold medal and diploma of honour for their celebrated Scotch whiskies.

DR. SCHMELTZ, of Nice, has recorded in the *Gazette Médicale de Strasburg* a case in which he removed the sarcomatous breast of a girl, aged twenty, during anæsthesia caused by hypnotism.

THE number of persons vaccinated in New South Wales during the last twenty-nine years was, according to an official return, only one-third of the total number of births.

THE sixty-third Annual Meeting of the Society of German Physicists and Therapeutists was held in Bremen, on September 16, 17 and 18, under the presidency of Dr. Von Hoffmann, of Berlin.

ACCORDING to an American missionary, Bombay is a promising field for dentists, especially if they be of his own nationality. There is, he says, only one good dentist in the city, and he charges $7·50 for drawing a tooth.

THE sale of poisons in Japan is regulated by a series of new and stringent regulations. No poison can be sold for industrial purposes without an order from a professional man, stating the purpose for which it is required and the name and address of the person who gives the order.

MR. GEORGE TAYLOR, of Liverpool, is the inventor of an ingeniously devised disinfecting bottle for giving an automatic supply of disinfecting fluid to the flush-water of w.c.'s. The bottle is placed neck downward in the w.c. cistern, and, immediately the flush occurs, the disinfecting fluid begins to flow out of the bottle.

THE Official Report of the proceedings of the Berlin Congress will be published in separate parts, the first of which, it is expected, will be ready in the autumn. There will be over two hundred addresses and discussions, and the work will necessarily be a portly volume.

LONDON, the most healthy of all cities in the world, may yet become one of the most beautiful. The Metropolitan Public Gardens Association have offered £100 each to twenty of the Metropolitan vestries for the planting of London streets with plane-trees, provided only that they will undertake to maintain them.

THE William F. Jenks Memorial Prize of 450 dollars will be awarded to the author of the best essay, in English, on the "Symptomatology and Treatment of the Nervous Disorders following the Acute Infectious Diseases of Infancy and Childhood." Essays must be addressed to Dr. Louis Starr, College of Physicians of Philadelphia, Penn., U.S.A., and reach there before January 1st, 1892.

THE most evil-smelling of substances is said to be the newly discovered substance known as Thioketone, a mono-sulphuretted acetone (C_2H_6S), which has an odour in comparison with which that of sulphuretted hydrogen, or percaptan, is agreeable. It is impossible to distil a small quantity without infecting the whole neighbourhood with the vilest of smells.

A VISIT POSTPONED.—The *Journal of the American Medical Association* contains the following:—It had been very generally announced that Sir Morell Mackenzie would visit America, and lecture in some of our principal cities during the month of October next. It is now reported that, by reason of ill-health, he is obliged to cancel his engagements, and defer his visit until some later date.

THE want of a satisfactory provision of water fit for drinking purposes at English railway-stations is a matter which is just now engaging the attention of the Church of England Temperance Society, which has addressed communications to the railway companies on the subject. Both the water-supply and the closet-accommodation at a great number of the English railway-stations are notoriously bad.

THE London County Council have adopted the recommendation of its Special Committee on Water Supply; that that committee should be authorised to prosecute inquiries and negotiations relative to the supply of water, or companies supplying water; and, further, by authorising the committee to enter into tentative negotiations with the water-companies to ascertain on what terms they would be prepared to dispose of their undertaking.

A PHYSIOLOGICAL CURIOSITY.—According to a Sheffield daily contemporary some Boston butchers recently killed a fine bullock, but, to their grief and dismay, when the body was cut up it turned out to be all fat, not a particle of lean being found. This bullock was evidently a physiological curiosity, and might be converted into microscopical slides for students as showing the various stages of fatty degeneration (metamorphosis?).

Two female infants (twins) came to their death at Shipley recently, in consequence of an overdose of a "cordial" containing opium. The jury could not think of anything better to do than to return a verdict of "death by misadventure," without so much as inquiring whence the lethal compound was obtained. Such inquests are the veriest farces, and are a disgrace to a civilised country. How long, asks the *Medical Press*, are infants to be poisoned in this way without let or hindrance?

French Prize-Essays.—The *Société médico-psychologique* has decided upon the following subjects for prize-essays for 1891:—*Prix dubanel* (2,500 francs), "De la folie chez les veillards" (On Insanity in Old Age); *Prix Belhomme* (800 francs), "De la vision chez les idiots et les imbéciles." *Prix Esquirol* (200 francs); the prize will be given to the author of the best manuscript on any point of mental pathology. The essays should be forwarded by December 31, 1890, to M. le Dr. Ant. Ritti, *médecin de la Maison nationale de Charenton* (*secretaire général de la Société*). They should each be accompanied by a closed envelope bearing a motto, and containing the name and address of the author, and the MS. should bear the same motto.

Charcot's Joint-Disease in Australia.—What is considered to be the first example of Charcot's joint-disease ever clinically examined in Australia was exhibited on the 6th of June last, at the meeting of the New South Wales Branch of the British Medical Association, held at Sydney. The patient, a Frenchman, thirty-nine years of age, was shown by Dr. Scot-Irving, of the University of Sydney, the affected joints being those of the left knee and both hips. Much interest was evinced in the specimen, and a lively desire to make acquaintance with its characteristic features shown by the members present. The case appears to have been a most typical example of the disease, and a history of syphilis eighteen years previously was given in connection with it.

A Funny Health Officer.—The *N.Y. Medical Record* states that the Michigan State Board of Health recently took Health Officer Davis, of Close Village, to task, for failing to send in his weekly reports. His reply was unique. He said:—"There has not been enough sickness here in the last two or three years to do much good. The physicians find time to go to Milwaukee on excursions, serve as jurors in Justice Courts, sit around on dry-goods boxes, and beg tobacco, chew gum and "swap" lies. A few sporadic cases of measles have occurred, but they were treated mostly by old women, and no deaths occurred. There was an undertaker in the village, but he is now in the State prison. It is hoped and expected, when "green truck" gets around, melons plenty, and cucumbers in abundance, that something may revive business. If it does, I will let you know."

Dr. Henry Marcy, of Boston, in a paper recently published in the *Journal of the American Medical Association*, gives the following illustration of the forcible language which some senior members of the profession sometimes employ when referring to new operations and novel methods of treatment. A lady, who had been for a long time under the care of a senior member of the profession and a medical teacher without deriving any benefit, wrote to him to say she proposed to change her medical adviser. She consulted Dr. Marcy, and having obtained from him the opinion that her trouble arose, in a large measure, from glandular endomitritis, and that curetting was advisable, she communicated this opinion by letter to her former physician. She received the following reply:—"Boston, Sept. 30, 1889. Dear Madam,—Before you have the inside of your womb scraped out, make your will, etc. It is not a safe operation, and it is quite singular that other eminent doctors have not done it. I will bet $1,000 it won't cure you. Of course you can have it done if you wish. Yours truly, ———"

Proposed Law Against Hypnotism. — The following legislative measure has been introduced to the Chamber of Deputies of Belgium by the Minister of Justice:— Article I.— Whoever makes a public exhibition of a person hypnotised by himself, or anyone else, will be punished by imprisonment from fifteen days to six months, and with a fine of from 26 to 1000 francs. Article II.—Whoever, not being qualified to exercise the healing art, hypotises a person who has not attained the full age of eighteen years, or who is not sound of mind, will be punished by imprisonment from fifteen days to one year, and to a fine of from 26 to 1000 francs, even if the hypnotised person has not been exhibited in public. Article III.—The punishment of imprisonment will be used against any person who, with a fraudulent or malicious intention, makes a hypnotised person write or sign an act stating any agreement, disposition, or declaration. The same punishment will be applied to those who take advantage of agreements so attained.

Report on Leprosy in Colombia.—In a previous number we have drawn attention to the remarkable spread of leprosy in the Republic of Colombia. The twentieth number of the *Revista de Higiene of Bogota*, dated 20th June, 1890, is entirely filled up by the report of the Central Junta of Hygiene upon this disease in Colombia. Thirteen questions were made out by the Junta, concerning the causes and spread of leprosy, which were sent to medical men and others in the different districts. Returns could only be obtained from a part of all the pueblos in Colombia. The population of the Republic is about four millions. There were no returns whatever from Boyaca, Magdalena, and Panama. But from the replies which came from one hundred and twenty-two pueblos, they found that there were 601 lepers in Cundinamarca, 10 in Tolima, 988 in Santander, 50 in Cauca, 40 in Bolivar, and 35 in Antioquia; total, 1,724. Leprosy is now believed to be the results of a specific germ, and to be contagious, but the conditions under which contagion is realised are yet unknown. Many physicians in Colombia assigned heredity as the principal cause. Dr. Lucas Galo, who gave a return of four hundred and eighty-two individuals attacked with leprosy in the district of Locaima, said that he did not know any facts which show that leprosy is contagious. There seems a prevalent opinion that the use of pork, of fish, and of pepper, favours the spread of leprosy; some also think that these aliments hasten the progress of the disease. Other causes given, such as a hot and moist climate, and sudden changes of temperature, convey doubtful information, as it is known that leprosy may be prevalent in cold climates, such as Scandinavia. The Medical Commission proposes:—(1) To solicit the next congress to pass a law providing for the isolation of individuals affected with leprosy and elephantiasis; (2) to establish a special tax to defray the expense of observing the method of propagation of the disease, and for the erection and maintenance of lazarettos. To include this tax in the central budget of the Republic.

The London Medical Recorder.

ARTICLE 890.

THE MONTHLY MIRROR OF MEDICINE.

IN the *Union Médicale* of October 7th, Dr. Rodais gives an excellent *résumé* of M. Lion's neatly-published work on "Infectious Endocarditis." Nothing in connection with this subject is so striking as the complete transformation which bacteriological research has wrought in the views which were generally accepted on this disease only a few years ago. Ulcerative endocarditis was looked upon as a local malady, which became general through penetration into the blood of products formed at the seat of ulceration. Now, however, we have come to look upon it as one of the complications of a general disease. In point of fact, microbes can only reach the endocardium through the intermediation of the blood, and this fluid must, therefore, have been infected in the first instance. It is now well established that micro-organisms exist at the seat of the valvular lesions, both on the ulcerations and in the vegetations, and they are met with also in the infarcts which so frequently accompany the disease.[*] By cultures of blood taken from the patient during life, the same microbes have been obtained as were afterwards found in the endocardium after death. There are, without doubt, many different species of microbes related to this disease, and the endocarditis is merely the secondary manifestation of a number of different infectious states, which are, as yet, but partially determined. The modes in which those microbes make their way into the system are very variable. Cutaneous lesions of various kinds, such as wounds, burns, abscesses, etc., have been demonstrated as the points of entry. Sometimes it is by lesions of the mucous membranes that they enter. When the lung is the source, some important lesion, such as pneumonia or tuberculosis, may be present. Dr. Lion believes that the micro-organisms may effect an entry through the respiratory tract without in the first place localising themselves there. He is inclined to explain in this manner the cases of infectious endocarditis which are described as primary.

Sometimes infectious endocarditis is produced by microbes which are identified with well-known diseases; sometimes, on the other hand, it is produced by microbes which have not hitherto been described in relation with other affections. In the first group are included the following: (1) Endocarditis resulting from pyogenic microbes, properly so-called (*staphylococcus pyogenes albus* and *aureus*, *streptococcus pyogenes*), developing in the course of pyæmia, septicæmia, puerperal fever, etc. (2) Pneumonic endocarditis. (3) Endocarditis of typhoid fever. (4) Tubercular endocarditis. (5) Probably, also, the endocarditis of rheumatism, the eruptive fevers, and diphtheria, although the microbes have not been yet determined. In the second group are included cases in which Lion, Weichselbaum, and other observers have discovered special micro-organisms which have not been yet identified with those which are known to be related to other diseases.

The pathology of hæmoglobinuria forms the subject of an interesting paper by Dr. Copeman in a recent number of the *Practitioner*. Some former investigations by Dr. Copeman were related by Dr. Bristowe in a paper read before the Medical Society in April, 1889. Since then Dr. Copeman has experimented on several cases of hæmoglobinuria, and his results are quite confirmatory of those obtained in Dr. Bristowe's cases. They tend to prove that one of the first and most obvious phenomena in this disease consists in an enormous, and often extremely rapid, destruction of red corpuscles, such destruction depending on the direct influence of cold. Various forms of exposure to cold were tried, such as walks in the open air, cold baths, immersion of the hands in cold water, etc. In each case a rise of temperature and an attack of hæmoglobinuria followed. In eight experiments in which the blood was examined, immediately after the exposure to cold, and before any blood-pigments had been passed by the urine, it showed a large decrease in the number of corpuscles. The injurious action of cold on the blood-corpuscles is further shown by the fact of the loss of consistence, and the variability of size and shape of the corpuscles which survived, and by the tinting of the plasma by the escaped hæmoglobinuria of the corpuscles. The removal of the pigment did not usually affect the urine for a time, varying from half-an-hour to three hours after the exposure. Accompanying the pigments in the urine was a proteid at first thought to be serum-albumen, but subsequently shown to consist mainly of globulin. A very important fact was observed in one experiment in which, in a fairly warm day, exposure out of doors was followed by a comparatively slight, but unmistakeable destruction of corpuscles, with only moderate elevation of temperature, namely, that no hæmoglobin whatever appeared in the urine, but in its place albumen, or rather globulin. It may be inferred from this that, when the unwonted destruction of corpuscles is slight, albumen alone appears in the urine, the hæmoglobin being used up in the system, probably converted into biliary and urinary pigment. Indeed, as Dr. Copeman suggests, we may regard paroxysmal hæmoglobinuria as an exaggeration of a physiological phenomenon, since the red corpuscles are constantly being destroyed in health, the products, however, being used up in the system. If, from any cause, the destruction oversteps a certain limit, the system is unable to entirely make away with such products of destruction, and albumen appears in the urine. If, again, the destruction be still greater, hæmoglobin will also appear in the urine It must be admitted that, although the destruction of red corpuscles is the immediate antecedent of an attack of paroxysmal hæmoglobinuria, there must be some peculiarity of the blood-corpuscles themselves, which renders them unduly sensitive to the influence of cold. It may be, as Murri suggests, that the cause is to be sought in a chronically diseased condition of the blood-forming organs, which renders the corpuscles less resistant to cold. In this connection, it is interesting to note that in all the cases Dr. Copeman has collected, there has been a history of syphilis.

In the *Lancet* of October 4th, Dr. Donald Hood relates the case of a boy, aged fourteen, in whom the symptoms of hæmoglobinuria followed an attack of acute nephritis. During the illness, which lasted above three months, the patient passed through three stages: the stage of an ordinary acute nephritis, with characteristic urine; the stage of hæmoglobinuria, during which the urine which followed the attacks was usually of a vinous colour, and contained the deposits met with in that disease; and lastly, a stage in which the urine, though frequently tinted, was without deposits. Dr. Hood, commenting on this case, asks whether—granting the essential pathology of the disease is a faulty state of the corpuscle, rendering it liable to albuminate disintegration—it is equally certain that the disintegrating process always takes place in the systemic circulation? Dr. Hood urges certain reasons which, in his opinion, contra-indicate the general circulation as being necessarily, in all cases, the scene of this peculiar disintegration.

In the same number of the *Lancet* as Dr. Hood's paper, appears a note by Dr. Fouberton on the association of oxalate of lime crystals in the urine with hæmaturia or hæmoglobinuria. Dr. Fouberton refers to a correspondence which recently took place, under the heading "Hæmaturia and Garden Rhubarb," in which several instances were recorded of the passage of oxalate of lime crystals following upon the ingestion of rhubarb. He thinks that there is not sufficient evidence as to whether these cases were hæmaturia or hæmoglobinuria; but, as these conditions are often associated, Dr. Fouberton suggests that these observations may have an important bearing on the pathology of two closely allied diseases, paroxysmal hæmoglobinuria and Raynaud's disease. In both these diseases, as is well known, oxalate of lime crystals have been observed to be present in the urine in association with the passage of blood, or blood-pigment.

The existence of peripheral neuritis in cancerous subjects has only recently attracted attention. Oppenheim and Simerling were the first to mention it, in 1887. They described two cases of cancer of the stomach, in which histological examination of certain peripheral nerves showed distinct alterations of the nature of neuritis. In the last number of the *Revue de Médecine*, Auché, of Bordeaux, contributes an important paper on this subject. He gives a careful clinical history of ten cases of cancer, with a detailed account of the histological examination of several peripheral nerves in each case. He passes in review the symptoms side by side with the results of the histological examination of the nerves, and draws certain conclusions which are thus briefly summarised: (1) Peripheral neuritis develops very frequently in the course, and under the sole influence of cancerous affections. (2) The nerve-lesions occur in various seats, but, in general, the nerves most distant from the nerve-centres are those which are most frequently affected. (3) These nerve-lesions are in relation with certain clinical symptoms characteristic of peripheral neuritis, which ought to be looked for in cases of cancer. (4) Peripheral neuritis in cancerous subjects is probably the result of certain nutritive changes in the fluids and tissues of the body, occurring in the cachectic period of cancer.

ARTICLE 891.

THE MONTHLY MIRROR OF SURGERY.

ONE and by no means the least important advantage which has been gained by the pre-eminent position attained by abdominal surgery, is the increase of our knowledge with the successful treatment of diseases of the appendix vermiformis. The pericæcal region is now becoming a well-known arena for surgical interference. The results which have been achieved by dealing surgically with inflammatory and other lesions of the vermiform appendix, have been most gratifying, and especially so to the patients, whose lives would otherwise have been sacrificed saving for the measures adopted. As there is no reason to suppose that diseases of the appendix are more frequent to-day than was the case in the past, the inference is unavoidable that formerly many cases passed unrecognised. The fatal cases were called peritonitis or intestinal obstruction; the mild ones were thought to be gastritis or gastro-enteritis, or intestinal colic. The literature upon this subject is, as might have been expected, beginning to assume important dimensions, and the latest contribution of most regard is that published by Lewis A. Stimson, in the *New York Medical Journal* for October 25th last. The author, who describes his paper as "A Contribution to the Study of Appendicitis," in the first place alludes to the notable paper by Dr. McBurney, published in the same Journal for December 21st, 1889, under the title of "Early Operative Interference in Disease of the Vermiform Appendix." In this paper of Dr. McBurney's there is information concerning the pathological processes of the early stage, the varying conditions of the appendix, the position and time of appearance of pus, the relation or absence of relation between the symptoms and the pathological conditions, and the points by which the presence of the disease might be recognised at the outset. The author's (Lewis A. Stimson) paper is based upon the report of twenty-one cases which had been under his care during the past twelve months. Full notes of the cases, which are interesting, are given. Eight of the patients were not operated on; three were treated by the evacuation of pus in connection with the pericæcal region. Ten were treated by laparotomy with opening of the general peritoneal cavity. In all but one of the latter cases, the incision was made along the outer border of the rectus from the level of the umbilicus nearly to the centre of Poupart's ligament. The appendix was tied with catgut close to the cæcum and cut away; the stump was cauterised with pure carbolic acid; the adjoining intestines were carefully protected during the operation by flat sponges and cloths held against them by long, broad retractors; a drainage-tube and packing of iodoform gauze were used in all cases, and usually removed on the fourth or fifth day. The external wound was closed for two-thirds or three-fourths of its length. Absolute diet was maintained for twenty-four hours, and then small quantities of milk were given. In eight of these cases the removal of the appendix gave the opportunity to examine it directly, and investigate the cause of the morbid process—contrary to a widely-held opinion, in only one of them was there a foreign body or a fæcal concretion of sufficient size to have been a factor in inducing the inflammation discovered. In all cases, however, a marked inflammation of the mucosa was present, and one that in some cases had almost obliterated its structure by studding it with round cells. Total or partial obliteration of the lumen was found in three cases; and in another, in which the appendix was short and considerably distended, it seems probable that there was a constriction between the the point of excision and the cæcum; in one of these three cases the stricture was double, but not impervious. As the first two gave a history of previous attacks of considerable severity, the author deemed the strictures to be the result of cicatricial contraction; but in the other one, there was a history of many transitory attacks of pain, but of none lasting for any length of time, and accompanied by fever, and the stricture itself was not cicatricial, but was covered by a normal mucosa. The author therefore thinks it probable that the cause may sometimes lie in a congenital defect, a narrowing due to defect of development. Attention is drawn to the fact that stricture of the appendix is presumably an important factor in provoking or increasing the inflammation, and by preventing the escape of the contents of the appendix, in inducing perforation. Cases have been reported in which the appendix was literally a bag of pus, an abscess upon the point of breaking, and for such a condition a total occlusion of the lumen on the proximal side is necessary. Still, perforation is not always due to obstruction and distention, and in one of the author's cases the obstruction was not complete, and there was no distention, yet a slough, a quarter of an inch in diameter, had formed without any warning symptoms, and the attack began apparently with its separation.

The fact is alluded to that appendicitis sometimes follows an attack of gastro-enteritis caused by an error in diet. Again, the same lesion can occur in connection with typhoid fever. In giving an analysis of his cases, the author points out that the *course* of the affection, when not interrupted by operation, is shown or indicated in nineteen of his twenty-one cases; and if to these are added the previous attacks in the same patients, a total record of thirty attacks is gained. Of these, twenty recovered and two died, without operation; pus was found in nine; in three of these it formed a large abscess, which was opened without exposure of the general peritoneal cavity, and with the formation of a persistent fæcal fistula in ano; in four, the collection of pus was removed by laparatomy, with one death; in two, general peritonitis occurred in consequence of perforation, with one death and one recovery after laparotomy. Two cases threw no light upon the probable cause, because the process was cut short by an early removal of the appendix. It is worthy of note that the pus in all the author's cases was intra-peritoneal, with possibly one exception. The uncertainty of the course of the disease was strikingly shown in two of the cases. In one, convalescence that had been satisfactorily progressing for several days, was suddenly interrupted by a violent recurrence, followed by death in a few hours. In the other case, a slough formed in the wall of the appendix without having given rise to any symptoms that attracted the patient's attention, perforation supervened with general peritonitis, and the patient was only saved by operative interference.

The history of all the cases proved that the danger from the affection is greater in patients who have had previous attacks, and that recovery spontaneously from one attack does not enable any reliance to be placed upon the probable termination of the next one. The author gives the following details of the course of an attack which gets well under medical treatment:—The attack begins with pain, more or less severe, at first central or general, but soon localised, or with maximum severity in the right iliac fossa, and accompanied or soon followed by nausea. The temperature rises, and may reach 102° at the end of twenty-four hours, but during the second day it falls, although the tenderness on pressure or coughing persists, and by the third or fourth day the temperature is normal, and the tenderness less. In cases that suppurate with or without a perforation protected by adhesions, the temperature continues to rise, or is maintained after the second day, and distinct resistance, or a well-defined tumour is recognisable on deep palpation in the right iliac fossa. This tumour is constituted at first, not by an abscess, but by agglutinated loops of intestines, and exploration of it with a hypodermic needle is very unlikely to yield pus. Death may come through septicæmia after suppuration, by shock, or acute peritonitis after perforation, or rupture of an abscess, or by a septicæmia that apparently originates in a functional obstruction of the intestines. The main point in the diagnosis of these cases is, according to the author, the fact pointed out by Dr. McBurney, of the presence of constant pain on pressure at a spot two inches from the anterior superior spine of the ilium, on a line drawn from it to the umbilicus. It is, of course, understood that the value of this symptom is greater in the cases in which an abscess of considerable size has not formed, or the abdomen is not greatly distended and rigid. With regard to the operation itself, the author adds that in the search for the appendix, he has found it advantageous to follow the anterior longitudinal bundle of muscular fibres of the cæcum downwards and inwards; it ends at the root of the appendix. For the ligature of the appendix, he has always used a catgut ligature, and has simply tied it as in tying an artery. No ill-result has followed in any case. In conclusion, the author makes the following statements:—(*a*) Inflammation in the cæcal region is in the immense majority of cases an inflammation in and about the appendix. (*b*) A certain proportion of the cases will resolve spontaneously within two or three days. (*c*) The others, and they are much the larger number, seriously endanger life in their evolution, and are liable at any moment to assume a condition that is practically fatal. (*d*) We have no means of distinguishing those cases which will go on to the formation of an abscess without accident from those in which this evolution will be gravely interrupted. (*e*) Early laparotomy—that is laparotomy within the first three days—enables us to arrest the process by removal of the cause, and is less dangerous than expectant treatment. (*f*) It is maintained that such laparotomy should be done, not in every case, but only in those which clearly do not belong to the first named, the resolving class.

Article 892.

ON BLUE ŒDEMA IN HYSTERICAL PERSONS.[*]

The following is an abstract of the chief points in the *leçon*. White œdema of hysterics has been rarely noticed by authors, from Sydenham down to Weir Mitchell, but the blue (or blue-violet) kind was first so denominated by the author (*Leçons du Mardi*, Juin 1889). Like the white kind, this œdema is of the hard sort, not yielding to the pressure of the fingers, but it is characterized, apart from the colour, by a remarkable lowering of the local temperature, two, three, four, and even five degrees Centigrade. This blue œdema, nevertheless, is only a variety or higher degree of the white kind. There are always present, in addition, either sensory derangements (anæsthesia, hyperæsthesia) or motory derangements (paralyses, contractures), and the patients nearly always show the characteristic marks of hysteria.

Prof. Charcot showed two cases. The first was a girl, aged twenty-two, of neurotic family. The mother was "nervous;" her father had convulsions. One of his brothers was a suicide; one daughter and two grand-children of the latter were epileptic. The patient had convulsions in infancy, was very impressionable, cried for nothing, and had globus hystericus and palpitations. Ten months ago, without apparent cause, she woke up one night with severe pain in the right arm and wrist. Next day the hand was swollen and cold; on the third day it became violet, almost black. A doctor diagnosed "nervous arthritis," and gave salicylate of sodium and antipyrine without effect. After a fortnight the hand was unfortunately placed in a plaster case for two months, and the actual cautery was occasionally applied through an opening in the back of the case. *The patient did not feel these applications at all*, though much upset each time. On removing the case the hand and wrist were found contracted, immobile, and completely anæsthetic. This anæsthesia reached to the shoulder-joint, and ended in a characteristic circular line. At present the temperature of the morbid hand is 24·3° C.; of the other hand 28·5° C., showing a difference of 4·2° C. (7·5° F.). The course of the disease is as plain as day. The patient first had hysterical arthrodynia with blue œdema, and the plaster-dressing caused contracture (accompanied by complete and characteristic hysteria). Careful examination easily brings out hysterical symptoms. Taste and smell are blunted on the right side; hearing is almost abolished on the left. But there is no retraction of the visual field, nor other ocular derangement. Finally, the patient has nervous attacks, and hyperæsthetic points are found here and there on the body, more or less clearly of hysterical origin, viz., one below the left breast, another on the top of the vertex; a third at the summit of the left ovarian region.

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[*] A Clinical Lecture. By Prof. Charcot. (*Progres Medicale*, October 11, 1890, No. 41.)

The disease is a vaso-motor derangement, of apparently spasmodic character. It may go on to true infiltration, with or without other local symptoms, and it may disappear as suddenly as it came—sometimes of itself, sometimes by the aid of the physician.

In the next case presented (the case already described in *Leçons du Mardi*, Juin 1889), the patient was a strong man showing blue œdema of the hand, and from time to time paraylytic symptoms in addition. Such cases are difficult to diagnose, because blue œdema, a lesion very like it in appearances, figures amongst the trophic derangements of syringomyelus, in which there is organic alteration of the central grey matter of the spinal cord (Remak, *Berliner klin. Wochenschr*. 1889. No. 3; Roth, *De la gliomatose medullaire, Arch. de Neurol.* 1888). Absence of anæsthesia is an important mark of syringomyelus, but the same absence may exist in hysterical blue œdema, as in the present case. The history of this case runs thus:—The man, aged forty-six, was a sailor, then a night-watcher in a factory, and he became hysterical from disappointments. He had frequent vertigo, and one night during sleep, three years ago, a paralysis of the right hand set in, with violet coloration, coldness, and at this time complete anæsthesia. The attack went off completely, as suddenly as it came, but occurred again from time to time. The vertigo also recurred frequently, and there was loss of taste on one side of the tongue. The man has now "grand" hysteria at times, with epileptoid phases, and passional attitudes; so that, although there is no anæsthesia, there is no room for doubt as to hysteria.

Raynaud's disease, or symmetrical asphyxia of the extremities, cannot be confounded with the above, owing to its symmetry, and steady progression ending in mortification Again an inflammatory œdema, a phlegmon, has local and general high temperature and other characteristic signs.

In a third case, a girl, aged twenty-three, who was subject to attacks of grand hysteria, and who, moreover, presented permanent signs of it—complete left ("sensitivo-sensorielle") hemianæsthesia, considerable retraction of both visual fields, dyschromatopsia, etc. Hypnosis was easily induced in its three progressive forms, viz., lethargy, catalepsy, and somnambulism. On April 26, 1890, she was hypnotized (somnambulist or highest degree), and it was suggested to her that her right hand and wrist were swollen and violet. This condition was gradually realised in the most perfect manner within a few days. A ring she wore had to be filed off. There was some paresis of the wrist, but none of the fingers, but they could scarcely be moved owing to the great swelling. Anæsthesia for touch, pain, and temperature existed, and sensibility appeared in the left hand (usually anæsthetic). Prof. Charcot then suggested that the hand was cured, that it was not weak, nor swollen, nor coloured. Within a quarter of an hour, it was as white as the other hand, and as slender. Moreover, sensibility had returned, while the other lost its sensibility. As to treatment, the author strongly opposed all rigid appliances, such as plaster-dressings, in despite of Tolkien's publication on their marvellous effect in hysterical contractures in young subjects. (*Zeitshrift f. klin. Med.*, 1890, t. xvii., Supp.) These cases only show that such treatment is sometimes harmless. The general condition should be treated by tonics and hydrotherapy, the local by massage, various æsthesiogenic agents, and possibly magnetic transfer. Suggestion during hypnosis may be tried. All this is for the contracture and anæsthesia, for the œdema comes and goes, and needs no attention.

E. J. EDWARDES, M.D.

ARTICLE 893.

ON THE CLIMATE OF MOUNTAINS.

DR. PASSERINI, in three articles, in the *Gazetta degli Ospitali* (Nos. 71, 72, 73, 1890), considers the action of mountain climates upon the human economy. The curative effect of residence at high elevations may be assigned to four causes: the greater purity of the air; the diminished pressure and greater dryness of the atmosphere; the lower temperature, the more frequent, more marked, and sudden vicissitudes in the atmosphere; and the more notable and variable quantity of ozone. That the air of high mountains contains much fewer germs and gaseous impurities of all kinds is easily proved; nevertheless, it is not clear that this makes much difference to the health, save in special situations, such as large towns with bad sanitary arrangements. Dr. Passerini observes that London, the great city of five millions of inhabitants, under its cloud of mist and smoke, has a mortality that many villages of Italy may envy. In considering the diminished air-pressure as we ascend a mountain, the author gives us a number of striking calculations. The cutaneous surface of the body at sea-level sustains a pressure of 17,000 kilogrammes; but the surface of the lungs is fifty-four times greater than that of the skin, so that the vesicles of the lungs sustain a weight of 918,000 kilogrammes. The cutaneous and respiratory surface together thus sustain a pressure of 935,000 kilogrammes. But in climbing a mountain, the atmospheric pressure diminishes at the rate of one cubic centimètre of mercury for every 100 mètres, so that, at a height of 5,000 mètres above the sea, the atmospheric pressure is reduced wellnigh one-half, that is, to 9,082 kilogrammes, and the barometer descends from 760 to 460 millimètres. What, then, is the effect of this greatly diminished pressure upon the health of animals? We may here recall that the pressure of the atmosphere endured by the human frame is, in some conditions, much increased. For example, in diving-bells men work under water at a depth of as much as thirty-two fathoms, and in the compressed-air baths, which have been constructed for therapeutic purposes, patients are exposed to a pressure of two or three atmospheres.

Theoretically, it has been held that this greatly increased pressure must force the blood into the internal viscera, especially the brain and spinal cord, which are practically air-tight. Nevertheless, we must remember that the fluids of the body are incompressible by the weights applied to them, and that the atmospheric pressure on the cutaneous and pulmonary surfaces acts equally in all directions. Fortanini and Otto have found, by actual observation in chambers of compressed air, that there is no diminution of the calibre in the mesenteric vessels and webbed foot of the frog. Be this as it may, it is known that workmen cannot endure the great pressure in diving-bells without injury to health for any long time, and that in coming out of them they are sometimes seized with dangerous illnesses, apparently owing to the rapid diminution of air-pressure. There is swelling of the belly, and tension outwards of the membrana tympani. The respiration and the pulse become more frequent. The face becomes red; the eyes injected. They are seized with darkness of sight; sometimes with bleeding from the nose and air-passages, and ecchymosis under the skin. A graver result, fortunately rare, is a syncope, generally mortal, owing to the development of minute globules of gas in the vascular system. Without any such fatal issue, illnesses have followed of long duration, sometimes with paralysis of the legs, rectum, and bladder, showing that the spinal cord has been affected, probably from embolisms in the lateral columns and centre of the cord, caused by the globules of gas in the vessels.

In the *Archives de Neurologie* (September, 1889), there is a very discriminating and carefully written paper* by Dr. Catsaras, of Athens. The human organism has much adaptive power for changing pressure, and at a height of 8,000 feet (the height of Simla) scarcely any apparent change is noticed in the normal life of man and animals. Dr. Passerini, however, tells us, that in the war with Mexico the French troops were seized with the *mal des montagnes* at a height of from 2,100 to 2,220 mètres.

I have myself lived for days at a greater height than this on the Himalayas without feeling any change in health. Dr. Passerini says that people dwelling at an elevation of from 3,500 to 4,000 mètres have a weak constitution, while at 5,000 mètres above the sea, with a pressure of 406 mm. of mercury, and a tension of oxygen of 11¼ per cent., it does not seem possible to live long. In balloons the limit which can be reached without danger is variable; the celebrated aeronauts, Croce and Spinelli, died at an elevation indicated by a pressure of 260 mm., while their companion, Tissandrier, survived. Glaisher ascended with impunity to a height of 11,000 mètres above the sea-level, indicated by a mercurial pressure of 191·1 mm. In these cases the intense cold must also have an influence on the bodily condition. At high elevations less oxygen enters the lung, and the carbonic acid in the blood accumulates. Not only is the air at high elevations very dry, but the fluids of the surface of the body pass more readily into vapour owing to the diminished air-pressure. It seems to me that Dr. Passerini is right in allowing no influence to the increased proportion of ozone on high mountains. He need not even have admitted that such an increase really occurs. My own observations render it doubtful whether there is any increase of ozone above 4,000 feet. Though he gives his paper the title of *La Cura di Montagna*, Dr. Passerini has little to say upon the restorative effects of mountain air. He tells us that residence in a high mountain is good for dyspeptics and for those suffering from malarious fevers. This, however, is nothing new. He defers to another article the consideration of the benefit derived by phthisical patients from a mountain climate. He observes that residence at high elevations is contra-indicated in organic heart-disease, especially when the valves are affected. In fact, it has been found, both in our Indian Sanitaria and in the Engadin, that patients suffering from deep-seated organic disease do not benefit by residence in high mountains. Dr. Passerini does not seem to have made any study of the observations made in the British Hill Stations, both in the East and West Indies, which afford such valuable experience of the effects of the climates of mountains.

WILLIAM W. IRELAND, M.D.

ARTICLE 894.

ON THE SHIFTING OF THE APEX-BEAT OF THE HEART ON RESPIRATION.

DR. P. E. LIVIERATO contributes* a note of some observations which he made in the Clinique of Professor Maragliano, of Genoa, on this question. Dr. Livierato observes that in all the treatises on symptomatology, from the oldest to the newest, and in all the Manuals of Physiology, we are told that the apex-beat of the heart is shifted by the respiratory movements. This change in the place of the shock of the heart is, these authors say, due to the movement of the diaphragm. Eichhorst† tells us that if through any cause the power of movement of the diaphragm is hindered, then the shifting of the seat of the apex-beat is no longer observed. According to all those authorities, the change in the seat of the cardiac impulse consists in a shifting downwards and outwards at every deep inspiration, and upwards and inwards at every strong expiration. Landois‡ writes, that in pulmonary emphysema, the descent of the diaphragm shifts the seat of the impulse downwards and inwards. According to the authorities on this subject, the apex-beat becomes more distinct in expiration, while in inspiration it may not be felt at all, being covered by the left lung-tissue interposing between the chest-wall and the heart. These are admitted facts, no longer deemed capable of dispute. Riegel and Tuckzek have observed that in some cases the opposite of this takes place. The impulse of the heart becomes more distinct and vigorous in inspiration, while in expiration it becomes weaker and less distinct. Having an opportunity of examining the cases after death, they found that these new symptoms were caused by adhesions of the pleura and pericardium. They explained the changes in the cardiac impulse in the following manner. When there are extensive adhesions in the anterior margin of the left lung to the outer surface of the pericardium, these adhesions are drawn by the increase of the volume of the lung following on inspiration. In this way the heart is drawn more closely towards the wall of the chest, which causes the impulse to become more distinct on inspiration. On the other hand, during expiration, the heart, no longer tugged forwards, falls backwards, and in consequence the impulse is not so distinctly heard. These two physicians then see in this observation a sign diagnostic of pleuro-pericardiac adhesions. Eichhorst observed the same symptom in a case of diffused bronchial catarrh, which was more pronounced in the anterior and lower portion of the left lung. This disappeared with the cessation of the catarrh. Here, writes Eichhorst, the mechanism was different, nevertheless he gives no serious explanation of it. Dr. Livierato engages in a future work to demonstrate the inexactness of the views of Riegel and of Tuckzek. He tells us that he has made a large number of observations upon healthy individuals, as well as on patients with heart-disease, in whom the margin of the left lung was normal, and there was no reason to suspect the existence of pleuro-pericardiac adhesions. He illustrated and confirmed these observations by graphic tracings, experimenting upon persons supine, sitting, erect or lying on their sides. during quiet respiration and during strong inspiration, and then during strong expiration. These were supported by experiments on the dead body. Dr. Livierato's studies will shortly be published. In the meantime he gives the following conclusions:—(1) The apex-beat is normally shifted by exaggerated respirations. (2) The displacement is not appreciable in quiet breathing. (3) The shifting of the apex-beat depends upon the increase of the volume of the lungs, especially of the left lung, following on inspiration. (4) In this change in the apex-beat, the diaphragm plays only a secondary part; if it have any action at all, it is in shifting the apex-beat downwards. (5) The shiftings of the impulse of the heart may be produced in the dead body without any action of the diaphragm. (6) In forced respiration, the heart's impulse is shifted inwards, downwards, and forwards. (7) The most extensive shifting is inwards, then downwards, and then forwards. Relatively speaking, the most noticeable is the shifting forwards. (8) The shifting following respiration is most marked in the sitting position. (9) The modification in the volume of the lungs, depending upon the exaggerated or respiratory actions, is capable of moving the heart against the laws of gravity when the patient is lying on his side. (10) The inspiratory shifting of the heart's impulse inwards, downwards, and forwards, can be masked in those cases in which the left lung covers the surface of the heart on the left side. (11) The shifting of the heart inwards is more marked when the expansion of the right lung is limited by pathological conditions. (12) The cases of Riegel, Tuckzek, and Eichhorst confirm my own views. In their cases, the infiltration of the margin of the left lung, impeding the expansion of the pulmonary tissue, is clearly the cause of the shifting forwards of the heart. This displacement is owing to the pushing from behind forwards of the left lung, which is increased in volume by profound respiration. (13) Hence it is erroneous to suppose that this phenomenon is symptomatic of pleuro-pericardiac adhesions. (14) My observations prove a fact not hitherto observed: that during strong inspirations the apex-beat is shifted in the normal state inwards, downwards, and forwards, and in forced expirations it is shifted outwards, and backwards. (15) These displacements depend upon respiratory modifications in the volume of the lungs, especially of the left lung.

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* "Des Accidents par l'Emploi des Scaphandres."

* *Gazzetta degli Ospitali*, September 21, 1890.

† "Methods of Physical Examination," v. 2.

‡ "Lehrbuch der Physiol des Menschen."

WILLIAM W. IRELAND, M.D.

ARTICLE 895.

WOOD ON THE CURATIVE TREATMENT OF EPILEPSY BY SURGICAL MEANS.*

THIS paper, published at Montreal, a city where Dr. Wood formerly held the post of Professor of Pathology, deals in an exhaustive way with the literature of the subject, namely, the curative treatment of epilepsy by surgical means. The term epilepsy is confined to the so-called idiopathic variety, and does not include Jacksonian and hystero-epilepsy, nor "epileptiform" and post-paralytic forms. The writer draws a broad distinction between *relief* and *cure*, and insists that the latter should not be confounded with temporary freedom from the attacks. It is doubtful whether the neurosis that underlies the cerebral attacks is ever suppressed, but there can be no question that the exciting cause or causes may in many cases be removed.

The varying causation of epilepsy to some extent explains the success that has been claimed for so many remedies, both medical and surgical, that bear no relation to anything known of the etiology of the disease. Remembering Gower's proposition that epileptic convulsions may arise from a "discharge" of any of the grey matter of the encephalon which subserves sensori-motor processes, one should recall the fact that practically every part of the organism is directly connected with some encephalic sensori-motor centre. Gross central lesions affecting motor areas may produce epileptic convulsions ("Jacksonian"). To these may be added a legion of definite peripheral irritations issuing in localised cerebral "storms." Recent advances in cerebral surgery form a brilliant and valuable contribution to rational medicine. Here the cause of the "encephalic discharge" is an irritant operating in the immediate neighbourhood of or within the motor area itself. Then, again, mental force directly influences sensori-motor areas, and thus, in a certain number of cases, attacks are induced by psychical causes, such as fright. In these cases active treatment, *e.g.*, the knife, might so impress the patient's mind as to bring about a cure.

The author first quotes a number of instances of lasting cure following the removal of an irritant. Larrey's classical case is cited where recovery followed the removal of a piece of dead bone thirty years after injury by a shell. Another instructive history is recorded by Schurig, namely, that of a boy who recovered from his fits upon the extraction of a bit of gravel from the meatus auditorius.

Dr. Wood next turns to the discussion of surgical cures of idiopathic epilepsy. He points out that almost every one of the innumerable proceedings that have been advanced for that purpose could claim its cures and furnish a working hypothesis. Setons and issues are ancient remedies, and Gower thinks they often do good in some unknown way. Blisters and the cautery have had many advocates, and Brown-

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* *Canada Med. Record*, Sept. 1890.

Séquard applies them round a limb when affected with an aura. It is certainly a well-known fact that burns often cure epilepsy, and the same is true of amputatations. Phlebotomy, in the old days of bleeding, seems to have met with some success. Ligature of the carotids was at one time a recognised means of treatment. It was undertaken to lessen the blood-flow to the "irritable" nervous centres, and furnishes a fair array of cures. Of late years ligature of the vertebral artery has been largely practised. Alexander, of Liverpool, reports twenty-one cases; three were quite well a year after the operation; nine so free from fits that they might be put down as cured; and eight sufficiently improved to justify the operation. Tracheotomy as a curative measure was originated by Marshall Hall. It was extensively practised, and in spite of its irrational character, many cures and examples of relief are recorded. Trephining is a very old surgical treatment of epilepsy, apart from such rational procedures as raising of depressed bone, or removal of tumours. Idiopathic epilepsy, reported to have been cured in this way, may have yielded to the psychical influences of an "operation." One would like to know, however, what relation the surgeon supposed to exist between the trephining and the disease. The important reflex relations of the reproductive system have rendered it subject to many operative procedures. It is not easy to see how the removal of a healthy organ can bring about a cure of the disease, yet such cases undoubtedly occur. Circumcision; castration; Battey's operation for removal of "normal" ovaries; clitoridectomy—all claim their cures, apparently on good ground. With regard to the last-mentioned, Reynolds thinks that an equally severe operation would do as much good if performed on the back of the neck, the mouth, or the toes. It is difficult to see how the excision of normal ovaries can cure idiopathic epilepsy unless the mental impression made upon the patient be the cause.

The remainder of the paper is devoted to a discussion of tenotomy of the ocular muscles as a curative measure in idiopathic epilepsy. Dr. Stevens, of New York, published a number of cases cured in this way. "That the irritation, headache, dim vision, &c., caused by refractive errors and anomalies of accommodation have issued in epilepsy and other functional diseases is now undisputed." Dr. Stevens claims that even when spectacles have relieved "eye-strain," so far as visual acuity and ciliary muscles are concerned, want of muscular balance may still cause epilepsy. This muscular "eye-strain" Dr. Stevens calls "heterophoria." It is a common cause of functional nervous disorders, and the person affected may not be aware of its existence. Tenotomy appears to be the chief remedial measure, and must be repeated, if necessary, fifteen or twenty times. Numerous cases of cure, more or less complete, have been published. Dr. Wood, however, places "graduated" tenotomy as a cure for epilepsy in the same category with tracheotomy, vertebral ligation, circumcision, and other surgical cures, for each of which so much has been claimed in former times. The reasons for this conclusion are exhaustively given.

ARTICLE 896.

ACROMEGALY OR MARIE'S DISEASE.[*]

A BRIEF description of the principal characters of this disease—an affection, either so rare or so little recognised, that but thirty-five recorded cases have been so far published—may not be altogether devoid of interest. From the symptomatic point of view, four classes of phenomena may be considered, alterations in the upper and lower extremities, in the head, or "extrémité céphalique," in the trunk, and, finally, subjective symptoms which evidence a disturbance of general health more or less severe.

(1) On examining a patient suffering from this affection, one notices that his hands are much increased in size, that the soft parts on their palmar aspects are considerably swollen, and project like cushions; that the fingers are thickened, and are as thick at their extremities as at their roots, but that neither the fingers nor the hand as a whole are lengthened in any marked degree, the increase being rather in thickness and massiveness. The other segments of the upper extremity may be also enlarged, but to a much less considerable extent. This description applies equally to the foot and lower extremity, except that here the increase in size is never so great.

(2) With regard to the "extrémité céphalique," the face is altered in a most striking and remarkable manner. It is lengthened and of an oval shape; the forehead, which is low, is supported on enormous orbital protuberances, the nose is frequently immensely increased in size, the zygomatic regions project, and the lower jaw is much enlarged, the massive chin being projected forwards and downwards in such a manner as to give these patients quite a characteristic aspect. On the other hand, the superior maxilla is but slightly altered. The soft parts also are affected. The lips are increased in size, the lower one especially, and it frequently projects in a remarkable manner. The mouth is usually open, and the tongue, which thus becomes visible, is noticed to be voluminous, being increased both in length and thickness.

(3) The trunk presents much less alteration than the head or extremities, but curvatures of the spinal column are not unfrequent.

(4) The subjective symptoms observed are headache, aching in the limbs, and especially in the joints, exaggerated hunger and thirst, frequently polyuria, and sometimes glycosuria, and in females amenorrhœa is usually present. Many patients complain of general weakness and lassitude, and they are depressed, and may even have suicidal tendencies.

As a general rule the disease commences during adolescence, or a little later, usually about the age of twenty. According to Marie it is never congenital; it develops slowly by the gradual hypertrophy of the extremities and of the face. No particular symptom attracts the patient's attention at first, so that sometimes it is the medical attendant who first remarks it. In other cases the patient will notice, for instance, that his rings, or hat, or gloves, or boots, have become too tight. A patient who played the violin was obliged to abandon it, as his fingers had become large and clumsy, and he accordingly devoted himself to the cornet. Soon, however, he found it necessary to change the mouthpiece of his instrument, for which his lips had become too large. Once established, the disease advances slowly, and little by little the hands and feet attain an enormous size. The face is generally affected later. A veritable cachexia may set in at last, and patients sometimes die of syncope, or of cerebral compression. An intercurrent disease may cut short the course of the affection, which otherwise may last for ten, twenty, or even thirty years or more.

As to the various theories propounded to explain this very remarkable disease, they are still most vague and uncertain, the fact being that next to nothing is known of its pathology, or of the conditions which cause it. W. A. FitzGerald, M.D.

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[*] Thesis. By Dr. SOUZA LEITE, Paris: Lecrosnier,

Article 897.

VON RUCK ON PROGNOSIS IN PULMONARY TUBERCULOSIS.*

This paper was read before a medical society, and is based upon an analysis of five hundred and fifteen cases, of which fifty-nine recovered, and sixty-five showed material improvement. The work is laborious and thorough. Those cases only are included in which the bacillus was demonstrated microscopically; *improvement* and *recovery* are also determined by the presence or absence of the specific micro-organism. Of the three hundred and ninety-one fatal cases, fifty-seven per cent. have shown at one time encouraging improvement; sixty-seven of these to such an extent that permanent arrest seemed probable. In the latter cases, the relapses were almost all due to exposure or other preventable causes.

The influence of age appears to be favourable in proportion to the number of years up to fifty, when it becomes slightly adverse. As regards sex, all the female patients between ten and twenty died, while between forty and fifty there were 25 per cent. of recoveries, as against 15·4 in males of the same age. Menstruation and pregnancy are unfavourable, and the author concludes that puberty and the climacteric, especially if attended by complications, are two great predisposing factors. With reference to heredity, he not only feels convinced that it is an indirect factor in the acquirement of tubercular disease, but also that the prognosis in such cases is much less favourable. No one would now maintain any theory of direct transmission of germs. The writer claims that the subjects of heredity furnish the greater number of cases of pulmonary tuberculosis, and that had heredity no influence, the number of cases should be the same in those who have and those who have not a consumptive family history. He does not believe that any human being possesses absolute immunity from infection, and has no doubt that if enough of the tubercle bacilli find entrance into the organism, no matter by what avenue, infection will result. The question of heredity was fully answered in five hundred and one cases, and in two hundred and two of these a phthisical family history was shown to exist, most frequently transmitted through the mother or grandmother. Indirect hereditary predisposition, by which is meant a condition where the offspring readily acquires tubercular affection, could be shown in two hundred and seventeen. These conditions included later births in large families; twins; impaired health of parents (cancer, syphilis, etc.); nervous or mental disease of parents. The writer asks if it be not reasonable to suppose that the minimum amount of infecting material affects such offspring with phthisis where it would be resisted and overcome by stronger persons of a better stock. In ninety-six remaining cases there was good family history and good previous health. In twenty-six of them the disease followed attacks of typhoid, pneumonia, etc., while in thirty it was ascribed to catching cold, which Dr. von Ruck takes to mean catching "tubercular infection." His figures show 4·5 per cent. of recoveries in cases having family history; in those with indirect hereditary predisposition, various classes give 6·5, 4·5, ·5, and 7 per cent., with a sum of 5·9 per cent.; the chief interest lying in the fact that 37·6 per cent. of those without any such predisposition recovered. As to the influence of the stage of the disease, it is self-evident that the earlier a case comes under treatment, the better will be the outlook. Taking the improved and recovered classes together, there are ·45 per cent. of recoveries in the early, and ·20 per cent. in the advanced cases, many of the deaths being from preventable causes. The extent of lung-tissue involved necessarily influences prognosis. The mere fact that a cavity exists need not necessarily cloud the prognosis, if the cavity is of moderate size and located favourably. Large cavities in the lower lobes, or which have an imperfect outlet, are unfavourable.

The statement is made that so long as the disease is not hopelessly advanced, and a fair degree of digestive power and of assimilation of food can be maintained, we need not despair. On the other hand, however encouraging other signs may be, failure of nutrition is of grave import. Gastric troubles are often due to alcohol and improper food. Purely functional disturbances frequently accompany the initial stage of the disease and simulate dyspepsia. Slight peptonuria, demonstrated by Ehrlich's method, has been noted in a number of cases. The amount of fever shows pretty clearly the activity of the pathological processes at work, and is usually at its highest during the stage of softening, absorption, and excavation. If, during that period, the fever is moderate, and only a small area of lung affected, we need not despair. A febrile period usually corresponds with improvement. The cough is not usually troublesome in cases where the temperature is below 100° F. It is often severe and exhausting, however, where the bronchial mucous membrane is extensively involved. Cough due to catarrhal states of the upper air-passages, and to symptomatic catarrhal bronchitis, as a rule, yielded to inhalation, and did not affect prognosis. The quantity and quality of the expectoration stand in intimate relation to the stage of the disease, which may be inferred from the presence of blood, pus, cheesy particles, etc. The pulse-rate, commonly increased in phthisis, even in the absence of fever, is slow or normal in auspicious cases. Tubercular laryngitis was found in five only out of eighty-one early, but in one hundred and eleven of four hundred and thirty-four advanced cases. Painful deglutition seriously interferred with nutrition, and the severe paroxysms of cough tended to exhaust the patients. As to the influence of pulmonary hæmorrhage, it was found to occur in one-third of cases seen in private practice; but in less than one per cent. of hospital cases. It almost invariably followed over-exertion. In the early stages, the bleeding is slight and due to diapedesis following inflammation. In the latter stages, moderate hæmorrhage comes from granulating cavities, or, when severe, from ruptured vessels. Even a small loss of blood becomes a serious matter to tubercular patients. Profuse hæmorrhage, if repeated, leads to rapid exhaustion. Pleurisy, if dry and circumscribed, did not influence prognosis; neither did simple pleurisy with serous effusion. Tubercular pleurisy, as a complication, was rarely recovered from. After resection of a rib for purulent effusion, patients improved rapidly for a time, but afterwards died. Rectal fistula was noted in twenty-seven cases;

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* "Prognosis in Pulmonary Tuberculosis." By Karl Von Ruck, B.S., M.D. (*Philadelphia Medical News*, Sept. 13, 1890.)

twenty-four were in the advanced stages, when the fistulæ did not appear to exert any influence on the disease.

"In conclusion, the personal hygiene and the healthful environments of patients; their steadfastness of purpose and determination; their own proper estimation of the importance of early measures and of implicit compliance with advice; their willingness to make necessary sacrifices; and also the painstaking management of the physician in charge, and his ability to prevent even slight complications,—all exert influences which are none the less real or important because their effects are an unknown quantity."

ARTICLE 898.

REPORT OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY, 1890.

THE report of the American Ophthalmological Society is just to hand, from which we gather that the twenty-sixth Annual Meeting of the Society was held, last month, at the Hotel Kaaterskill, Catskill Mountains. Dr. Hasket Derby, of Boston, was the president. The proceedings were opened by a paper by Dr. W. F. Morris, of Philadelphia, on two cases of brain tumour, with interesting eye symptoms. One was that of a woman, married, aged thirty-two, who, for some months before being seen, had complained of failing vision. No double vision. Movements of lid and ocular muscles good. Right pupil responded promptly to light. The left was slower in its response, and was larger than the right. The ophthalmoscope showed a low degree of hypermetropia and hypermetropic astigmatism. Discs normal. The field of vision in left eye was defective in upper and outer quadrant; in the right eye the defect was in the upper and inner quadrant, but not so marked. Subsequently, that is, some ten months afterwards, she had a slight convulsion, pain developed on the right side of the head and in the eye. Later, the right optic disc began to become hazy and slightly prominent. Left disc also became swollen. Twitching of shoulder muscles ensued; headache increased; nausea, without vomiting, supervened. A month before death there was a convulsion, followed by nystagmus. The autopsy proved the correctness of the diagnosis which had been formed, namely, a tumour of the base of the brain, probably near the optic thalamus. The second case was one in which a woman had lost the sight of one eye, and was rapidly losing that of the other. A year previously she was seized with deafness in the right ear. Six months later severe neuralgia of the right trigeminus occurred. Later there was double vision and gradual failure of sight. The right eye was slightly prominent, the pupil semi-dilated, and irresponsible to light. There was paralysis of the external rectus. There was in the right eye a dense greyish haze of the retina, most marked about the nerve. The disc was slightly in advance of the retinal level. In the left eye vision was diminished, and there was a semi-transparent haze in front of the disc. There was loss of smell on the right side of the nose, and the skin and mucous membrane on this side was less sensitive than on the other. There was absolute deafness on the right side. Six days later the left eye became quite blind. Then all the symptoms increased in intensity. Severe dental neuralgia supervened. A few days before death, the right eye became so prominent that the lids could not close over it. After death a carcinomatous growth was found, involving the second, third, fourth, fifth, sixth, seventh, and eighth nerves on the right side, and the second and third on the left side.

Dr. C. Oliver, of Philadelphia, contributed a paper on the history of a case of intracranial neoplasm, with localising eye symptoms. When seen by the author, the patient had right lateral homonymous hemianopsia, the left field of vision being the smaller, with well-marked Werniche hemiopic pupillary reaction sign. In the remaining field there were floating scotomata from green, with slight subnormal colour perception. In the right fundus there was a broad, superficial, blotch-like hæmorrhage, extending over the lower outer quadrant of the disc, with enlargement and tortuosity of both the retinal veins and arteries of the same side. The diagnosis was made of a gross intracranial lesion near or in the left optic thalamus. Autopsy shewed a glio-sarcoma involving the external portion of the left optic thalamus, as well as the corpus striatum almost as far as its anterior third.

The next paper was on a case of "Transient Amblyopia, with bi-temporal hemianopsia," in a patient suffering from malarial cachexia. Twenty-four grains of quinine daily resulted in a complete cure. The case was under the care of Dr. G. C. Harlan, who read the paper.

Dr. Bull, of New York, in a paper "On the Extraction of Dislocated Lenses from the Eye, whether transparent or cataractous," maintains that in the majority of cases it is possible to extract a lens dislocated into the vitreous by external manipulation, without the introduction of any instrument into the eye. The manipulations are as follows:—The lids are held open by a wire speculum, and the section made upwards with a narrow knife. The speculum is then removed, and the upper lid lifted away from the ball with a wire elevator. Pressure is then made against the lower part of the eyeball; the pressure being made directly backwards, the lens will be seen to rise and appear at the pupil. Sometimes it comes through the pupil, but occasionally the use of a blunt hook or wire spoon becomes necessary. If continued pressure fail to push the lens through the vitreous pupil, or occasions prolapse of the vitreous, some other method must be substituted. For a number of years the author had not found it necessary to introduce a spoon into the vitreous chamber in order to remove a dislocated lens floating in the vitreous.

Dr. H. Derby, of Boston, read a paper on eight cases of double zonular cataract among ten members of the same family, also one of removal of a large exostosis of the orbid with preservation of sight. The bony growth measured 39 by 28 by 30 millimètres, and weighed twenty-six grammes.

Dr. Millikin, of Cleveland, read the notes of a case of foreign body remaining in the eye about twenty years, followed by abscess in the scleral wall; the abscess was opened, and recovery ensued. The foreign body was a bit of musket-cap.

Dr. Norris, of Philadelphia, followed with the notes of two cases of foreign body in the orbit.

Dr. Millikin, of Cleveland, read a paper on a case of complete paralysis of the lateral movements of both eyes, ability to converge remaining intact.

Dr. Charles E. Rider made some observations on the "Winking Test," and Dr. Lippincott on "New Tests for Binocular Vision."

Dr. B. A. Randall discussed the question, "Can Hypermetropia be healthfully Outgrown?"

Dr. H. Noyes, of New York, read a useful contribution on "The Treatment of Muscular Asthenopia and its Results." The paper was based upon a study of one hundred cases of muscular asthenopia, in which prisms were employed. The symptoms noted were ocular and general. Among the former were pain, blurring and unsteadiness of print, inability to look at moving objects, difficulty in seeing the nose, photophobia, unsteadiness of the globe, spasm of the accommodation and conjunctivitis. Among the general symptoms found were headache, which often occurred on first waking, and increased during the day, vertigo, nausea, insomnia, melancholia, pain in remote parts, tenderness over the supraorbital nerve, and nasal catarrh. The muscles affected were: weakness of the external recti in ninety-two; of the internal, four; general weakness of the muscles, one. Many of the patients had been subjected to general and local treatment without relief. In some cases the use of the prisms was at first tentative. In more than half the cases headache was a prominent symptom. It was in most instances relieved by the use of prisms. In some it was lessened, and in a few it was not benefited at all. The final results were: complete relief in seventy-four cases, moderate relief in six, no relief in thirteen, temporary relief in six. In the large number of cases, the prisms were constantly worn.

H. PERCY DUNN, F.R.C.S.

ARTICLE 899.

THE CAUSES AND TREATMENT OF PLEURISY.*

AN interesting discussion on this subject took place at the meeting of the Congress of the Italian Medical Society, held at Rome on the 20th October.

Dr. Patella (Perugia), who opened the discussion, remarked that bacteriological researches had done much of late years to throw light on the causes of pleurisy as well as to simplify the rules of treatment. Ten years ago, only three forms of pleurisy were recognised: the rheumatic, the traumatic, and that caused by the extension to the pleura of an inflammatory process, having its origin in the lung. To-day, however, we know that there are pleurisies infectious, that is to say, of microbic origin. Although the sero-fibrinous form is still considered to be rheumatic, it is difficult to explain its occurrence without assuming the intervention of some pathogenic agent other than simple chill. It is probable that the chill merely prepares the ground for microbic infection, by modifying in some way the circulation in the blood-vessels or lymphatics, and although in many cases of sero-fibrinous pleurisy endeavours to demonstrate the presence of microbes have been unsuccessful, it is unsafe to conclude that this affection is not of microbic origin. We should multiply the examinations as much as possible in each individual case, and be careful to make the exploratory puncture as low as possible, the microbes seeming frequently to be present only in the lowest part of the effused fluid.

According to Ziemssen, there exist pleurisies which are not of microbic origin, as, for instance, that coming on in the course of rheumatic fever. In the speaker's opinion, however, those cases in which the negative result of bacteriological researches has caused their microbic origin to be denied, are far from conclusive. How often is it impossible to demonstrate the existence of tubercle bacilli in a pleuritic effusion, whose origin is none the less most certainly tubercular? This fact is explained by the anatomical structure of tubercle, which, until softening occurs, does not permit of the escape of the bacilli. It is therefore chiefly by clinical evidence that we must determine the nature and origin of pleurisy.

Patella has come to the following conclusions relative to the etiology of the disease:—(1) There exists a sero-fibrinous form caused by the encapsuled micrococcus of Fränkel. (2) There is, on the other hand, a form of pleurisy with abundant effusion whose origin is exclusively tubercular. (3) In tubercular subjects a pleurisy may occur which is not of tubercular origin. (4) There exist forms of pleurisy of chemical origin whose cause is as yet insufficiently understood. (5) It belongs to clinical, rather than to bacteriological, investigation, to determine the nature of many cases. (6) As to those forms which are secondary to an acute pulmonary affection (meta-pneumonic pleurisy), their origin is evidently that of the pneumonia. Their prognosis is, generally speaking, more favourable than in primary pleurisy. With regard to the question whether spontaneous resorption of a purulent effusion is possible, he believes it to be the case when the disease is caused by Fränkel's diplococcus. In all cases where examination has demonstrated the presence of microbe, there is reason to hope for the spontaneous resorption of even a purulent effusion.

Dr. Luzzato (Padua) believed that the pathogenic agents in suppurative pleurisy are the staphylococcus, the streptococcus, the tubercle bacillus, and also, although very rarely, the typhoid bacillus; and that sero-purulent effusions are seldom associated with tuberculosis.

Dr. Bozzolo (Turin) remarked that the typhoid bacillus is a more frequent cause of pleurisy than is generally imagined. He has seen cases where the diagnosis remained uncertain until an exploratory puncture enabled the presence of these bacilli to be demonstrated in the purulent effusion. In his opinion, the dipiococcus of Fränkel, which is of somewhat variable form, is frequently mistaken for the streptococcus.

Dr. Maragliano (Genoa) observed that there is still a good deal of controversy as to the relative frequency of pleurisy in the course of fibrinous pneumonia. According to his experience, there is rarely a case of pneumonia without pleuritic effusion, which makes its appearance usually between the third and fifth days of the disease. The quantity is, however, generally insignificant. It is habitually sero-fibrino-purulent, but may become thinner and more fluid, if the pleurisy become more extensive. In order to demonstrate the existence of these small effusions, the patient should be placed on his knees and elbows, recent effusions being generally capable of free movement on change of posture. The physician should be careful not to allow himself to be deceived in this examination by the mobility of the spleen. In case of doubt, the patient should be made to lie on his right side. The splenic dulness thus becomes displaced forwards, while the pleuritic effusions gravitates towards the vertebral column. Many other members of the society contributed to the discussion, enunciating opinions and bringing forward experiences which want of space makes it impossible to reproduce in this short article. The whole discussion is, however, well worthy of perusal.

W. A. FITZGERALD, M.D.

A LEPER BILL, legalising the detention of persons afflicted with leprosy, will shortly be introduced by the Government of New South Wales.

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* See *La Semaine Medicale*, October 29, 1890.

Article 900.

THE ACTION OF COMMON SALT ON PATHOGENIC ORGANISMS.[*]

This question, which, apart from its more purely scientific aspect, has a very practical interest in its bearing on the extent to which the salting or "pickling" of pork and other provisions may be relied on for the destruction of the germs of disease, was taken up about a year ago by Dr. C. J. Freytag, at the instance of Professor Förster. It is well known that salt tends to preserve meat, *i.e.* to prevent spontaneous putrefaction by its power of abstracting water from the tissues, and of coagulating the albumen, though solutions of 10 per cent. dissolve out a portion of the myosin, which, together with the potash salts and extractives, may be recovered from the brine. But the question to be decided was whether it would destroy the vitality of microbes, as it certainly does that of parasites higher in the scale of animal life; in fact, whether it could be looked on as a disinfectant as well as a preservative. The ancient Greeks, as Dr. Anagnostakis has reminded us, employed solutions of salt as lotions in the treatment of wounds, and A. Seibert had recommended its use in the local treatment of diphtheria. But R. Koch and Baumgarten were surprised at the little or, comparatively, negative effect of several substances, of which salt was one, commonly supposed to exert a destructive action on low forms of life, and Mertens had been equally disappointed in his experiments on the cocci of pus. These researches had, however, been conducted without adequate precautions, and in a casual way, and Dr. Freytag determined to carry out his investigation exhaustively and with every care, beginning with the pathogenic bacteria of diseases proper to domestic animals, but possibly communicable to man in the consumption of their flesh. He made use not only of pure cultures of the bacteria, but of the tissues of diseased animals, as the tubercular nodules found in the bodies of cattle suffering from "Perlsucht." To imitate the conditions presented by the process of pickling, he used so much salt that a portion always remained undissolved; in gelatine cultures this had the effect of liquefying the medium, when the bacteria and the undissolved particles of salt sank to the bottom of the tube, but with those in agar the colonies were simply covered by the finely powdered salt.

At regular intervals of time, fresh sowings were made from the salted cultures, and animals kept in clean and airy cages were inoculated from each of the salted cultures. He insists on the fact that for many years no case of natural tuberculosis had occurred among the guinea-pigs, and only a couple of cases, more than two years ago, among the rabbits kept in the laboratory for experimental purposes. The results in each case were as follows:—

Anthrax.—The spores grown on sliced potatoes were, as Koch had already shown, not killed or in any way affected by continuous exposure to the action of concentrated solution of salt for six months. Not so the vegetative germs, which were invariably killed after two hours' steeping of the organs containing them in a saturated solution. Although even a saturated solution failed to kill the spores, the limits, under which their germination and further development were possible, were determined by a solution of from seven to ten per cent. of salt in Löffler's bouillon.

Typhoid.—Koch-Ebert's bacilli, obtained from the spleen of a man who had died from enteric fever, and grown on sliced potatoes and on Koch's gelatin, retained their vitality and power of development in fresh media after six months' exposure to a concentrated solution of salt.

Rothlanf, or Pig Scarlatina.—These bacilli, provided by Pasteur, remained unaffected after two months.

Cholera (Koch's Comma) Bacilli.—The growth of these was luxuriant, liquefying the entire mass of the gelatin, and the salt when added in excess was deposited. Cultures made from these tubes—after four, six, twelve, and twenty-four hours—were all alike without result. Another series of experiments showed that eight hours' exposure to a saturated solution was invariably fatal to these bacilli, and that the highest concentration in which they could live was seven per cent.; but that five per cent. (not *two* per cent., as Uffelmann had asserted) was required to check their growth in any perceptible degree.

Erysipelas.—No effect was produced on the cocci of this disease by an exposure to a saturated solution for two and a-half minutes.

Staphylococci of Pus resisted a like solution for five months.

Diphtheria.—The Klebs-Löffler bacilli, in pure cultures made from a virulent and fatal case, were unaffected after three weeks in a saturated solution.

Tubercle.—Portions of the organs of a guinea-pig that had died of tubercular peritonitis, and the sputa of the same animal were, after two or three weeks' exposure to a concentrated solution, inoculated into the abdomen of a healthy guinea-pig, which died of tuberculosis a month later. But lest this one might have been infected by the diffusion of the dried sputa of the other in the air of the room, Dr. Freytag made a fresh series of experiments, precluding such an accidental source of fallacy, and found that artificial cultures of the bacilli in gelatine were not injuriously affected by the action of concentrated solutions for three months.

Nodules of perlsucht, after eighteen days' immersion in brine, were used with invariable success for the inoculation of rabbits; in fact, three months' steeping—a far longer period than is ever employed in pickling meat for human food—in no way lessened the infective power of the bacilli. Galtier's experiments, which gave a different result, were made with the expressed juices, not with the organs or tissues themselves.

In conclusion, Dr. Freytag observes that if it were urged that the bacilli of anthrax being killed, and the toxines assumed to be dissolved out into the brine, such flesh, *in the absence of spores*, might be eaten with safety; it would be, in practice, impossible to ascertain or to guarantee the absence of the spores.

The question of tuberculosis is, however, of greater practical importance, on account of the frequency of the disease, and the fact that much meat from animals suffering from it, in different degrees, finds its way into the market. Since boiling alone suffices to kill the bacilli—that is, provided the interior of the meat be raised to that temperature—the previous pickling, as suggested by the authorities at Lyons, is superfluous, and indeed, by inducing a false security, would be worse than useless.

Edward F. Willoughby, M.D.

The Berlin municipality is said to have spent about 80,000 marks (nearly £4,000), in welcoming the Members of the International Medical Congress.

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[*] Dr. C. J. Freytag. ("Zeitsch. für Hyg.," Bd. viii. h. 3.)

ARTICLE 901.

THE BERLIN INTERNATIONAL MEDICAL CONGRESS.*

Kölliker (Leipsig). "On the treatment of congenital Luxation of the Femur." For most cases "orthopædic treatment" (without operation) must suffice.

Hirschberg (Frankfort) also much preferred Hessing's orthopædic method. Hoffa (Würzburg) had operated twelve times, in each case with good result.

Gibney (N.Y.). "The treatment and final results of *tumor albus.*"

Obstetrics and Gynæcology.—Landau (Berlin) eulogized Thure Brandt's (massage) treatment of chronic uterine diseases, which was severely criticized by Skutsch.

Doléris (Paris). "On the physiological aims in Gynæcology and the necessity of a conservative Surgery." The preservation of the sexual function should be the chief object in treatment.

Doederlin described a simplified way of using Brandt's method. Rein (Kiev) advocated asepsis *vice* antisepsis in laparotomy, and Saenger (Leipsig) insisted on the importance of thorough drainage, Douglas's pouch being made dry first. This was concurred in by Cushing (Boston), Lawson Tait, and Bantock.

Lawson Tait: "The danger lies not in germs, but in dead tissue."

Van Ott (St. Petersburg) showed an electric glow-lamp for use in operations, to be fastened to a band on the forehead; also an ingenious breast-pump with two tubes, through one of which the mother aspirates, while through the other the milk flows into the child's mouth. Stewart (Philadelphia) showed a forceps with parallel blades.

Dührssen ("on operations on the portio vaginalis") advocated his method of suturing, in order to avoid perimetritis, which is so common, and is due to the disposition of the connective tissue about the cervix.

Simpson (Edinburgh). "On narrowing of the anal canal without removal of tissue, for simple prolapse." Lawson Tait's plastic operation he thought by far the best. After two more papers on uterine operations, by Sinclair (Manchester) and Marey (Boston), Truzzi (Mailand) reported two cases of osteomalacia cured by castration, and Fehling (Bâsle) read a paper on the origin and treatment of osteomalacia. The latter had cured four cases by operation; altogether in Bâsle, where the disease was frequent, eight cases had thus been cured. The disease was a tropho-neuritis starting from the ovaries. The asserted increase of lime in the urine was not proven, and the asserted alkaline diminution was not more marked than in other cachexia.

The next (Jiren) theme was "the indications and methods of artificial premature delivery." Parvin (Philadelphia), Macan (Dublin), Calderini (Parma), and Döhrn (Könisberg) read papers. Calderini (Parma) thought that a conjugate diameter of eight and a-half centimètres was the lower limit for artificial extraction of a living child by premature delivery. A discussion followed.

Veit (Berlin), in a paper on hæmatocele and hæmatoma, defined the former as an encapsuled hæmorrhage, the latter as hæmorrhage into the connective tissue, while intra-peritoneal hæmorrhage would mean that into the abdominal cavity. There was confusion at present in the use of these terms. Papers were read on ovariotomy, on salpingitis, and on the normal uterine mucous membrane and normal placenta.

Hygiene.—Eresmann (Moscow), in a paper on "crowded institutions," spoke of the large mortality in foundling hospitals, in Russia and Austria, as being diminished by the use of sterilized milk and other changes.

Celli read an important paper on the etiology of malarial infection, and showed bodies holding plasmodes in the cerebral capillaries.

Almquist (Gothenburg) read a paper on the reappearance of typhoid fever in various places after several years' interval, and showed that the water supply could not account for these occasional epidemics. Babes remarked that he had never yet found true typhoid-fever bacilli in drinking water.

Forster (Amsterdam), "On feeding large masses of men," in regarding the subject purely scientifically, first gave Voit's estimates of the requirements of a worker per diem, viz., 120 grammes albumen, 60 fat, 500 carbohydrates, and then reminded his hearers that Hirschfeld, Kumagawa, and others, have regarded this estimate as far too high as regards albumen. The strong potato-eating worker was contrasted with the weaker flesh-eating educated man. But this contrast was due in part to work. The speaker would maintain Voit's albumen estimate still, for albumen lessened the tendency to drink alcohol, assisted in the assimilation of fat (Zuntz), and diminished liability to infection in the intestinal canal. Milk was important, and should be sterilized in Soxhlet's or Bitter's mode.

Bujwid (Warsaw) described the present aspect of protective inoculation against hydrophobia. The mortality from bites after inoculation, in the Warsaw Institute, was lowered to about 1 per cent. Babes reported experiments, showing that two or three passages of rabies virus through pigeons produced Pasteur's "virus fixe," which was a certain cure. Petri said that hydrophobia was extremely rare in Prussia, and even in Germany generally; hence they did not see that special institutions were required.

Medicine.—"On myxœdema." Ord (London) and Mosler (Greifswald) read papers. The former observed that 10 per cent. of all cases were males, that in some recent cases heredity had been distinctly noticed, that there was sometimes enlarged thyroid, that the inclination to hæmorrhage was dangerous, and he then passed on to the pathology of the subject. The thyroid body was always abnormal. The peculiar connective-tissue changes were not confined to the skin. The disease "cachexia strumipriva" (Felix Semon), is identical with myxœdema; so is sporadic cretinism. Attempts to cure myxœdema, by implanting portions of healthy thyroid, deserve great attention. Mosler showed interesting photographs. A discussion followed.

Bacelli (Rome). "On malaria." Laveran's organisms in the blood were truly parasitical and cyclical, although they had not yet been isolated and cultivated. But injection of venous blood from a malarial person into another person had caused fever and the appearance of the organisms. Whether we had present the polymorphism of a single parasite, or the appearance of several kinds, was still doubtful The author now leaned to the latter view. Malaria causes fever, but not inflammation. Intravenous injection of quinine had cured desperate cases in his hands.

Maragliano (Genoa). "A contribution to our knowledge of the diseases of the blood."

Laache (Christiania). "On the treatment of anæmia." The author brought out the distinction that in chlorosis, in which iron is effective, the number of red corpuscles is less diminished, and the hæmoglobin more diminished, than in pernicious anæmia, in which iron is less useful than arsenic. Gibson (Edinburgh) explained Bunge's theory that morbid acids (from dyspepsia) prevent the absorption of iron from food; that if iron be given, it combines with these acids and prevents their morbid action. Hence probably the use of Sir A. Clarke's aperients: they remove these acids, and thus facilitate absorption of iron from the food.

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* Continued from the October Number (page 379) of the LONDON MEDICAL RECORDER.

Jacobi (New York) read a paper on the treatment of diphtheria in America.

Obstetrics and Gynæcology.—Several papers were read on the use of electricity in myomata, Cæsarian section, placenta prævia, and allied subjects. The Apostoli method appears to be gaining favour both in America and Russia, but Danion (Paris) declared the galvano-caustic (chemical) action to be a scientific error. He had treated 100 patients (2,000 applications) by a much milder electrotytic method with success. Gautier (Paris) considered this milder method illusory.

For an account of other sections, the reader is referred to the Transactions of the Congress.

E. J. Edwardes, M.D.

Article 902.

THE MICROBE OF MALARIA.

Dr. F. Plehn, in the *Zeitschrift für Hygiene*,* gives an account of some researches of his in this subject, and a history of the opinions entertained by others during the last twelve years.

In 1879, Klebs and Tommasi-Crudeli described a bacillus found by them in the water and soil of the Roman Campagna, which they were led by certain experiments to look on as the microbe concerned in the causation of malarial fevers.

In 1880, Laveran found in the blood of a subject of malaria, in Algiers, an organism, not present in that of healthy persons, which he called *Plasmodium*, and maintained to be the essential agent of the disease in opposition to Klebs and Tommasi-Crudeli.

Ziehls, in 1882, and von Sehlens, in 1884, discovered in the blood of malarial persons in Italy bacilli and cocci, but made no experiments. Previously to 1880 Koch's method of pure culture was unknown, and though Klebs and Tommasi-Crudeli had never found the bacilli in the blood, the transfusions of Dochmann, Gerhardt, Cuboni, Golgi, and Marchiafava were considered to be conclusive. But the Nestor of Bacteriologists, Ferd. Cohn, has since deprived the bacillus of all claims to a pathogenic character. Klebs himself has, at last, disowned his fondling, and Marchiafava and others have gone over to the other side. Laveran's conclusions have been supported and vindicated by the observations and experiments of Marchiafava, Celli, and Golgi, in Italy; Metschnikof, Czenzenski, and Sacharof, in Russia; Sternberg, Councilmann, and Osler, in America; and of Laveran himself, in Corsica, Tonkin, Madagascar, and Senegal, whose combined experience has gone far to establish its claims, though Dujardin, Pfeiffer, Rosenstein, and Hoffmann have alleged that the *Plasmodium* is present in the blood in other febrile conditions, as typhoid, scarlatina, and vaccinnia, and that it is, therefore, rather to be looked on as a modification of some of the normal elements.

Fischer, of Kiel, examined the blood of eighty subjects of malaria, from the Cameroons, West Indies, etc.; and Schellone, that of a large number of patients while in New Guinea, and of cases of recurrent attacks since his return to Germany, with negative results. It must, however, be borne in mind that the value of negative evidence is at a minimum when the object of the search is new, and only to be detected by special methods of examination and staining, demanding much technical skill and practice. Dr. Plehn, after nine months' preparation as assistant in the Hygienic Institute at the University of Jena, began his observations at the Moabit Hospital, in Berlin, on three cases of typical intermittent fever, in which the several stages were well marked. the temperature reaching a maximum of 41° C. (105·8° F.), and were respectively of the quartain, tertian, and quotidian forms; the last, however, later passing into the tertian. The two former, from Hamburg and Posen, gave negative results, but he was successful in the case of the last, a labourer, from Potsdam, who had suffered for two months from severe quotidian ague, for which he had had no medical treatment, having been refused admission to the hospital there from want of room. It is worthy of notice that after this man had been treated with large doses of quinine, and the quotidian had been succeeded by the tertian form, the plasmodia rapidly decreased in numbers, and soon disappeared entirely. This may account for the failure of many observers, to say nothing of the paucity of material at the disposal of most, compared with the opportunities enjoyed by Italian physicians, among whom Celli and Guarnieri, for instance, have treated as many as 2,000 patients in one summer. In the Potsdam case, Plehn found the plasmodia in abundance in all stages of the disease, but especially during the febrile exacerbations. Only the smaller were colourless, the larger being pigmented by granules and rods of melanine irregularly disposed. For the details of his manipulation we must refer to his paper.

In a postscript, he states that since going to press he had also found the plasmodia in abundance in the blood of a recurrent case returned from Sumatra, and that he intends to continue his observations on every opportunity. Edward F. Willoughby, M.D.

Article 903.

THE RESPIRATORY FUNCTION IN THOSE AFFECTED WITH DIMINUTION OF THE PULMONARY SURFACE.*

In 1886, Dr. G. B. Graziadei, under the advice of Professor Forlanini, of Turin, made a number of experiments upon the effects of respiration on the air in health, in order to gain a basis for similar studies on the pulmonary function in disease. These experiments being discontinued by him, owing to some avocation, were taken up by Doctors Canallero and S. Riva Rocci. Before giving their own results, they recall the observations of some previous physiologists. Weil and Thoma, experimenting on rabbits, produced a reduction in the pulmonary area by throwing in an injection of cacao-butter, thus inducing a state which, at least, from the suddenness of its supervention, might be compared to pneumothorax. They arrived at the conclusion that after a moderate reduction of the pulmonary area, the quantity of air introduced in a given time is not lessened, and may be even increased. When to a greater reduction of the pulmonary area, sufficient to withdraw respiratory power equal to that of a whole lung, there is no longer complete compensation, the animals take in less air, whilst the frequence of the respiration is diminished. In such cases the animal soon died. Bethke and Rauber, after cutting the vagi, found no alteration in the elimination of carbonic acid as long as there was no morbid alteration in the pulmonary tissues. The only observations of a similar character in the human subject were made by Möller. He experimented on three healthy persons, and seven patients in whom the pulmonary area had been reduced by pleuritic exudation, emphysema, and phthisis. He found the elimination of carbonic acid in these diseases diminished to a mean of 0·170 in the hour. This was at variance with the observations of Hanriot and Richet, who, in similar cases, found a mean exhalation of CO_2 of 0·6 in the hour. Wishing to study both the quantity of air used in respiration, and the chemical changes of the exhaled air, Doctors Canallero and Rocci invented a new apparatus. For its description we must refer the reader to the original article, and the woodcut (which, by the way, has got turned upside down in the Italian journal). Resuming the experiments of Graziadei, they found (1) that the quantity of air respired in a minute varies between seven and fourteen litres, the mean being 9·910; and correcting the experiments of other observers by the comparative weight of the bodies of those experimented upon, it was found that their measurements agreed pretty closely. Valentin, Brunner, Vierordt, and Berard, give 5·28 litres of air to the hour, that is from 8 to 9 litres in the minute, so that in every act of inspiration about 500 cubic centimètres of air are introduced into the lung. The number of respirations in healthy people between eighteen and thirty years old was found to vary from eighteen to twenty-two in the minute. Doctors Cavallero and Rocci found by their own experiments that the quantity of air used in a minute, by a healthy and robust adult, varies from 7½ to 14½ litres, the mean being nine litres. This is lower in women and in fasting people. (2) From their examination of the chemical constitution of the expired air, they found that the quantity of carbonic acid exhaled in the minute is about 255 cubic centimètres during fasting, and 315 cubic centimètres during digestion. (3) The quantity of oxygen absorbed during the minute varies from 305 cubic centimètres during fasting, and 360 cubic centimètres during digestion. The quantity absorbed during the hour varies between 300 cubit centimètres per kilogramme of bodily weight during fasting, and 355 during digestion. (4) The respiratory quotient oscillates about 0·83 in fasting, while during digestion it may remain the same, or rise and fall as the food taken is rich in hydro-carbon or albuminoids. (5) We know from the experiments of Andral and Gavarret that women, from their eighth year to old age, eliminate about one-third less carbonic acid than males. In men, during the whole period of sexual maturity, the difference may amount to from one-third to one-half.

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* Band viii., h. 1, 1890,

* *Giornale Internazionale delle Scienze Mediche*, 1890,

As the result of their examination of the modifications in the function of respiration attending the reduction of the pulmonary area, the authors present us with the following conclusions:—(1) There is no relation between the degree of reduction of the pulmonary area and the quantity of respired air. Whatever may be the reduction in respiratory area, the quantity of air used in respiration oscillates within certain limits. (2) In patients affected with reduction of the pulmonary area, the frequency of respiration is but little greater than in the normal state, while the depth of the inspiratory actions is slightly less. (3) The increase of ventilation which necessarily follows to keep up the function of the remaining respiratory area stands on an average about one-fourth in proportion to the increased frequency of respiration, and about three-fourths in proportion to the increased depth of the respiratory acts. (4) The increased frequency of respiration, and the diminished depth of the inspirations, in affections in which there is reduction of the pulmonary area, do not stand in direct relation with the amount of the reduced surfaces. (5) The patients affected with reduction of the respiratory area absorb during the hour, per kilogramme of bodily weight, the same quantity of oxygen as healthy individuals of the same weight, but they give out somewhat less carbonic acid in proportion to their bodily weight. The diminution of weight in these patients, from what it was in their previously healthy condition, brings about that the oxygen absorbed and the carbonic acid exhaled per minute fall under the average of healthy persons, being in the relation of 88 per cent. of O and 78 per cent. of CO_2 to the normal mean. (6) The respiratory quotient is lower than that of the healthy. (7) The diminution of the quantity of carbonic acid exhaled and of oxygen absorbed in a given time, do not stand in any direct relation with the amount of reduction of the pulmonary area; but depend solely upon the diminution of the weight of the body in these patients. (8) The function of respiration in the reduced pulmonary area is performed, the same way as in health.

William W. Ireland, M.D.

Anatomy and Physiology.

RECENT PAPERS.

904. Netchaieff, Dr. N. V.—On the Influence of Tepid Saline Baths on the Nitrogenous Metabolism and Assimilation of Nitrogenous Ingredients of Food in Healthy Persons. A Preliminary Note. (*Vratch*, No. 38. 1890, p. 863.)

905. Slütchevsky, Dr. A. I.—On the Influence of Tepid Saline Baths on the Assimilation of Fats in Healthy Persons. A Preliminary Note. (*Vratch*, No. 40, 1890, p. 908.)

906. Zavadsky, Dr. Zakhar A.—On the Influence of Tepid Baths on the Nitrogenous Metabolism and Assimilation of Nitrogenous Constituents of Food in Healthy Persons. (*St. Petersbury Inaugural Dissertation*, 1890, No. 27, pp. 56.)

907. Ferguson, Dr. John.—On the Nerve Supply of the Sense of Taste. (*Med. News*, Oct. 18, 1890.)

Art. 904. *Netchaieff on the Influence of Tepid Saline Baths on the Nitrogenous Metabolism and Assimilation of Proteids in Healthy Persons.*—In order to elucidate the effects, Dr. N. V. Netchaieff, of Professor I. T. Tchüdnovsky's clinic, in St. Petersburg, has carried out five experiments on as many healthy men, aged from twenty to thirty-four. Each experiment lasted twelve days, being subdivided into three periods of four days' duration, during the second of which the subject was taking (every day, three or four hours after his dinner), a full bath (of thirty minutes' duration), made of a one per cent. solution of chloride of sodium at 35°C. All other conditions remained identical with those during the fore-bath and after-bath periods. The dietary consisted of butcher's meat, beef-tea, milk, butter, bread, tea, and water. The following are the essential results obtained by the author:—(1) Under the influence of the baths, the assimilation of nitrogenous constituents of food invariably increases, the surplus varying in individual cases from 1·131 to 5·547 per cent. (of ingested proteids). The increase always lasts during the after-bath period and even attains, as a rule, a still higher level. (2) The nitrogenous metamorphosis usually improves both qualitatively and quantitatively, the increase oscillating between 0·086 and 15·735 per cent. and lasting during the after-period. (3) The cutaneous and pulmonary aqueous losses are augumented at the rate of from 723 to 2,313 grammes, the surplus commonly increasing still further in the after-bath period. (4) In a majority of cases, the body's weight slightly sinks.

905. *Slütchevsky on the Influence of Tepid Saline Baths on the Assimilation of Fats in Healthy Persons.*—Dr. A. I. Slütchevsky conducted his experiments simultaneously with Dr. N. V. Netchaieff (*vide supra*), on the same persons, and exactly in the same manner. He has found that (1) under the influence of the baths, the assimilation of fats is invariably depressed, the decrease varying from 0·662 to 3·624 per cent. (of ingested fats), and persisting during the after-bath period. [In three out of five cases, the assimilation was even diminished still further after discontinuing the baths]. (2) The amount of voided urine decreases from three to twelve per cent., the diminution exactly corresponding to an increase in the cutaneous and pulmonary aqueous losses, and lasting during the after-period. [In one case, however, in which the aqueous losses decreased after the cessation of the baths, the secretion of urine became proportionately more abundant.] (3) The body's weight mostly (three cases) slightly sinks, but sometimes (two cases) somewhat increases. [In the after-bath period, in three cases it increased from 100 to 150 grammes in comparison with the first day of the experiment, while in the other two it decreased 87·5 and 555 grammes.]

906. *Zavadsky on the Influence of Tepid Baths on the Nitrogenous Metabolism and Assimilation of Nitrogenous Constituents of Food in Healthy Persons.*—Dr. Zakhar A. Zavadsky, of St. Petersburg, publishes an able contribution to our knowledge of the important subject, embodying his own experimental researches (in Prof. S. T. Tchüdnovsky's clinic). The observations were made on five perfectly healthy young men, aged from twenty-one to twenty-five. In each instance the experiment, each of twelve days' duration, was divided into three equally long periods, during the middle of which the subject was daily taking one or two full baths, made of sweet water at 35° C., and lasting half-an-hour. The dietary was limited to roast beef (freed from fat and tendons), beef-tea, milk, white bread, tea with sugar, and drinking water (everything *ad lib.*). The principal outcome of the investigations may be condensed as follows:—(1) Under the influence of the baths, the assimilation of proteids invariably improves. In the case of one daily bath, the increase amounts to from 0·38 to 2·94 per cent., averaging 1 58; in that of two daily baths the respective figures are 1·56, 1·66, and 1 61. (2) In the after-period the assimilation decreases, though commonly remains yet better in comparison with the fore-bath days. [As a matter of fact, in three cases the assimilation was still increased from 0·02 to 1·92 per cent. comparatively with the beginning of the experiment, but in the other two cases it fell from 0·51 to 4·21 per cent.] (3) The nitrogenous metabolism always increases. In the case of one daily bath, the surplus oscillated between 2·09 and 2·59 per cent., averaging 2·43; in that of two daily baths the respective figures being 3·44, 5·907, and 3·8. (4) In the after-bath period the metamorphosis sinks, but still surpasses that in the fore-bath period from 0·78 (in the case of one bath) to 2·47 per cent. (in that of two baths). (5) The metamorphosis improves not only quantitatively, but also qualitatively. In other words, the proportion of under-oxidised nitrogenous constituents of urine markedly decreases, while that of urea as markedly increases. (6) The body's weight increases from 181 to 310 grammes. Even at the end of the after-period, the weight still remains increased from 91 to 305 grammes, in comparison with the first day of the experiment. (7) The influence of the baths on the cutaneous and pulmonary aqueous losses, and on the quantity of urine, is rather variable. In some persons (three cases) the losses increase, and the amount of urine decreases from 9 to 28 per cent.; in others (two cases), however, the losses prove to be diminished, and the quantity of urine augmented from 5 to 42 per cent. (8) The same holds true with regard to the bodily temperature; while in a certain proportion of cases there is observed a slight fleeting decrease of the axillary (0·1 to 0·3° C.) and rectal (0·1 to 0 2°) temperature; in others, some temporary elevation (0·4° C. in the rectum) may occur. (9) During the bath muscular strength (as measured by means of Collin's dynamometer) grows slightly weaker (from 0·2 to 1·1 kilogramme), but afterwards (three-quarters-of-an-hour after a bath) it increases on an average 0·9 kilogramme (comparatively with the time before the bath). (10) Tepid sweet-water baths afford, most decidedly, one of the most valuable and powerful hydrotherapeutic agents, and, as such, deserve every attention of the practitioner.

Valerius Idelson, M.D.

907. *Ferguson on the Nerve Supply of the Sense of Taste.*—The author observes that it is generally admitted that the lingual branch of the fifth nerve and the gustatory branches of the glosso-pharyngeal carry the nerve-fibres of taste to the tongue and palate. The question, however, that for a long time hung in dispute was whether these nerves were the real supply to the parts of taste, or whether they carried nerve-fibres from some other source. To aid in clearing up this doubt, he has brought forward the following case:—A patient had complete loss of taste on the left side of his tongue, extending to the tip. This condition had lasted two years. The most carefully-conducted tests with bitter, sweet, acid, and saline solutions, and with electricity, failed to elicit the slightest existence of taste on the left side of the tongue. The posterior part of the tongue, the fauces, and palate retained the power of taste, and a ready distinction could be made between sweetness and sourness. The region of the circumvallate papillæ could detect the metallic taste of a galvanic current from two cells. The patient died from phthsis not long after, and at the autopsy a small exostosis in the scaphoid fossa was found pressing upon the posterior opening of the Vidian canal, and by pressure destroying the Vidian nerve. The nerve-degeneration following this pressure could be traced along the main course of the Vidian, and thence along its two branches, the carotid and the

petrosus major. This latter enters the geniculate ganglion of the facial. The degeneration could be readily followed until the point was reached at which the chorda tympani is given off. The process of degeneration here left the facial and followed the chorda tympani throughout its length. This condition of secondary degeneration was traced from the chorda tympani to the lingual branch of the third division of the fifth nerve, and thence along the lingual. The author observes that the above case affords complete proof that the nerve-supply of taste for the tip and anterior part of the sides of the tongue comes from the fifth nerve, and enters the maxillary division of the same nerve. The course must be from the superior maxillary nerve into the spheno-palatine ganglion, thence by the Vidian, through the Vidian canal to the gangliform enlargement of the facial, along this to the chorda tympani, through the chorda tympani into either the lingual, a branch of the third, or inferior maxillary of the fifth.

Surgery.

RECENT PAPERS.

908. STRUMPELL, DR.—On Chronic Gonorrhœa Arthritis. (*Wiener. Med. Wochenschrift*, Oct. 11, 1890.)

909. MORROW, DR.—On a Surgical Remedy for Baldness. (*N.Y. Medical Record*, Oct. 25th, 1890.)

910. HESTER, DR. J. W.—On a Case of Gastro-Enterostomy by Means of Senn's Decalcified Bone Plates for Cancer of the Stomach. (*Austl. Med. Gaz.*, Sept. 15, 1890.)

ART. 908. *Strümpell on Chronic Gonorrhœal Arthritis.*—Strümpell has observed a case in which, eight days after the commencement of an acute gonorrhœa, acute rheumatism made its appearance, numerous points, both large and small, being affected. The patient had a recurrence of these joint-troubles several years later, and so severely as to make him present the appearance of an old case of disease of the spinal-cord. The hip and knee-joints were strongly flexed and incapable of movement, the muscles were much atrophied, and there was extreme tenderness on pressure over the sciatic nerves. There was serious effusion into the knee-joints. Strümpell thinks that these cases are not uncommon, and that they are frequently mistaken for multiple neuritis or disease of spinal-cord.

W. A. FITZGERALD, M.D.

909. *Morrow on a Surgical Remedy for Baldness.*—In the course of a discussion before the New York Academy of Medicine, the author stated that he had used grafts very much thicker than those used in Thiersch's method—grafts which included not only the entire thickness of the derma, but also subcutaneous tissue beneath. He had been led to do this in the case of a man who had become somewhat hypochondriac because of a scar on the scalp, which in later years became exposed from scarcity of hair. He first took grafts from the patient's own scalp, on the opposite side, by means of the cutaneous punch, and immediately transplanted them into holes of the same size made by the same instrument in the scar tissue. Very much to his gratification, union was perfect within a week. Four grafts were first made, and he waited several weeks to see whether the hair would grow. It did. He then made transplantations from another patient's scalp, and these also grew and bore hair luxuriantly. The grafts were fully a quarter-of-an-inch thick. There was no suppuration, no untoward result. He had employed the same method in one or two cases of epithelioma, and, while there was no indication of breaking down, there had not been sufficient time to justify conclusions. He thought the method had a wider field of application. For instance, it might be adopted in lupus, and in removing moles, warts, and other facial blemishes.

910. *Hester on a Case of Gastro-Enterostomy by Means of Senn's Decalcified Bone Plates for Cancer of the Stomach.*—P. J., aged thirty-six, a seaman, was admitted to the Newcastle hospital on June 16th, 1890, complaining of vomiting and some slight pain in the epigastrium. His history was as follows:—Four months before admission patient noticed that he vomited every two or three days, generally at night; no pain. This continued for about two months, when the vomiting became more frequent, and he felt some pain in the epigastrium, not continuous, but worse when vomiting. He found that he was losing weight rapidly, and on one or two occasions had passed black stools and vomited "coffee grounds." No family history of cancer. On admission, patient weighed 9½ stone. All his organs were healthy, with the exception of the stomach, which was very much dilated. Nothing could be felt by abdominal palpation. A fortnight later, on careful examination, an indistinct tumour was felt in the right epigastric region. Two days later the patient was anæsthetized for examination, but it had to be stopped before much information could be gained. A few days later he was immersed, in a hot bath, and the tissues being thoroughly relaxed a distinct hard lump was felt in the right epigastric region. It moved freely up and down on respiration, and seemed to be about three inches in length and one in breadth, lying transversely. Vomiting still continuing, in spite of daily cleansing of stomach with boracic lotion through a soft syphon tube, an exploratory laparotomy was proposed to the patient, a suggestion in which he readily acquiesced. At this time very little food, if any, passed the pylorus, and from the man's enfeebled condition the operation of pylorectomy was held by the staff to be absolutely out of the question, and Mr. Bowreman Jessett's operation of gastro-enterostomy by means of Senn's plates (as reported in the *British Medical Journal* of July 27th, 1889) was proposed as the only alternative. Some bone plates were supplied from the Prince Alfred Hospital, but they were crushed in transmission, and he therefore made his own from ox scapulæ. These were a fortnight in preparation, and during that time the patient's stomach was daily washed with boracic acid lotion, and he was allowed a little peptonized milk, plenty of raw beef juice, beef-tea, and a little meat, receiving also at the same time four nutrient enemata daily. Under this treatment his weight remained uniformly at 9st. 4lbs. On the afternoon of July 28, his stomach having been twice washed out during the morning, and the obstruction at the pylorus being now complete, Dr. Hester performed laparotomy by means of an oblique incision four and a-half inches in length, midway between the ensiform cartilage and the umbilicus, two-thirds of the incision being on the right side of the linea alba. A very large mass was then felt, involving the lower end of the stomach. After some search the first part of the jejunum and stomach were brought out through the wound, incisions made, bone plates slipped into position, brought into apposition,

and corresponding threads tied. The parts having been well washed with boracic lotion, and the surrounding boracic towels removed, the viscera were then dropped back into the abdominal cavity, and the wound closed and dressed. Patient was put to bed in the same room, near a good fire, and though the pulse was very feeble on completion of the operation, which lasted altogether a little over an hour from the first incision till the dressings were finished, he rallied during the night and spoke a little. He was fed entirely by nutrient suppositories (zymine), alternating with nutrient enemata every three hours, but the temperature remained subnormal, pulse very quick and weak, and he died twenty-five hours and a-half after the operation. *Post-mortem.*—Parts in good apposition, and lymph thrown out between opposed surfaces. Good patent canal between stomach and jejunum. The portion of intestine which had been exposed was congested, but there was no peritonitis. The stomach was found very greatly dilated with thickened walls, and the lower third was completely infiltrated by a mass resembling encephaloid cancer. The author remarks that, with reference to the operation itself, the two points of greatest difficulty which presented themselves were:—(1) The finding of the first part of the jejunum with as little manipulation as possible; (2) the keeping of plates in apposition whilst corresponding threads were tied. In this connection he urges that silk be used for threads and not gut, as everything depends on the plates being well brought together, and by using the latter the risk of breaking in the endeavour to bring the parts into good apposition is by no means inconsiderable.

Medicine.

RECENT PAPERS.

911. Wertheimer, Dr.—On Scarlatina without Fever. (*Münch. med. Wochenschrift*, No. 26, 1890; *Der Kinder-Arzt*, Sept. 1890.)

912. Weiss, Dr. (and others).—On Weil's Disease. (*Wien. med. Wochensch.*, xl., 11—15, 1890.)

913. Finlayson and Coats, Drs.—On a Case of Cancer of Œsophagus involving the Recurrent Laryngeal Nerve and the Body of the Last Dorsal Vertebra. (*Glasgow Med. Journal*, Sept. 1890.)

914. Leshtchinsky, Dr. Dmitry V.—On the Mortality from Measles in St. Petersburg during the period of 1871 to 1888. (*St. Petersburg Inaugural Dissertation*, 1890, No. 58, pp. 210, with 15 diagrams.)

915. Ohmann-Dumesnil, Dr.—On a Peculiar Case of Addison's Disease. (*Journal of the Amer. Med. Assoc.*, Sept. 13, 1890.)

916. Anderson, Dr. McCall.—On a case of Aortic Aneurism presenting only Indirect Symptoms. (*Amer. Jour. of Med. Sciences*, Nov. 1890.)

Art. 911. *Wertheimer on Scarlatina without Fever.*—The question as to whether scarlatina can occur without fever has been frequently discussed, and is not yet entirely settled. There is, however, no doubt that abortive cases occur which run their course without any appreciable rise of temperature, and that cases are not unfrequently met with in which the morbid symptoms are so ephemeral, and the general condition of the patient so little affected, that the disease is quite ignored until, perhaps, some consecutive phenomena make their appearance, such as desquamation, nephritis, or dropsy. Cases also are not very rare in which, after an initial fever of greater or less intensity, the subsequent course of the disease is free from fever, and finally some very rare cases have been recorded in which the converse occurs, the scarlatinal eruption making its appearance without any rise of temperature, and fever occurring at a later period. In the opinion of the author, however, no cases have as yet been recorded in which entire, or almost entire, absence of fever, during the whole course of the disease, has been proved by means of careful and methodical observations of temperature. Two such cases are now recorded by him. They are those of two children, aged respectively six and a-half and seven years, in whom, during the evolution of an undoubted scarlatinal eruption, the temperature did not exceed 37·8° C. in one, and 38·1° C. in the other. In both cases the disease ran its course without causing the slightest constitutional disturbance, but in one of them albuminuria appeared on the seventeenth day, and lasted for a week. In cases of this kind, the diagnosis of scarlatina, generally so easy, may become very difficult. It is easy to overlook the trifling and ephemeral eruption, the scarcely marked rise of temperature, and the morbid alterations of the pharyngeal mucous membrane, which may be of a very trifling character. There exists, however, according to the author, a symptom sufficiently constant to be of great use in putting the practitioner on the road to a correct diagnosis. This is the want of harmony between the pulse and the temperature, the very considerable acceleration of the pulse, notwithstanding the entire absence of fever. Unfortunately, there must always be cases in which, owing to the extremely rapid disappearance of the eruption, and notwithstanding the most careful analysis of the symptoms, the diagnosis of the non-febrile form of scarlatina will prove very difficult. [*Note.*—Similar cases to those recorded by Wertheimer are described by F. Beetz, in the *Münch. med. Wochenscrift*, No. 28, 1890.]

W. A. FitzGerald, M.D.

912. *Weiss (and others) on Weil's Disease.*—"Weil's disease" appears to be prevalent in Egypt, Syria, and the Balkan Provinces; but opinions are divided as to its claim to be considered a distinct specific and communicable disease, akin to but specifically different from relapsing fever, or merely a form of this fever occurring in persons already suffering from, or with constitutions broken down by, previous attacks of malarial fever. Dr. Sumbera reports three cases, Staff-Surgeon Hueber four, and Dr. Karlinski five; the first two maintaining its specific character, which is doubted by the last on the ground that all his patients had suffered from malaria, that relapsing fever was prevalent in the district (the brother of one being in the hospital for it at the same time), and that he found in the blood of all a spirillus very like that of relapsing fever, though somewhat smaller and more comma-shaped. Sumbera's patients, on the other hand (tradesmen between forty-eight and fifty years of age), and Hueber's soldiers (from twenty-two to twenty-five years), had all been in good health up to the date of their attacks. Sumbera's three cases and one of Hueber's ended fatally, the others recovering though very slowly; only one of Karlinski's died, the other four making rapid recoveries, notwithstanding their previous enfeebled health. It is, therefore, by no means improbable that Karlinski interpreted the nature of their illness correctly, and that he had to deal with quite a different disease from that described

by Sumbera and Hueber, in whose cases the course and symptoms of the attack and the *post-mortem* appearances presented so remarkable a uniformity that one description will serve for all. It set in suddenly with rigors, headache, vomiting, fever, and pains in the back and limbs. Jaundice appeared variously between the second and fifth days. Angina was, in Hueber's cases, a distressing symptom. The jaundice was soon followed by marked enlargement of the liver system and inguinal glands; the urine was scanty and high coloured, albuminous, or bloody; there was bilious or bloody diarrhœa, the breath was extremely offensive; and the liver and spleen tender. Death occurred in all on the ninth or tenth day, preceded by low delirium and coma. *Post-mortem* examination in all four fatal cases showed general icterus, fatty degeneration of heart, liver, &c., hæmorrhagic pachymeningitis, the liver deeply bile-stained, with dull swelling of the parenchyma, acute interstitial hæmorrhagic nephritis, and internal hæmorrhages in various organs. Neither observer was able to detect the spirillus in the blood. Wassilief identifies this disease with the Typhus biliosus or Icterodes Kartulis of Smyrna, though he admits that the ill-trained practitioners of Asiatic Turkey and Egypt may mix up many cases of relapsing and pernicious malarial fevers with the true Weil's disease.

EDWARD F. WILLOUGHBY, M.D.

913. *Finlayson and Coats on a Case of Cancer of Œsophagus involving the Recurrent Laryngeal Nerve and the Body of the Last Dorsal Vertebra.*—A man, aged fifty-six, admitted to the Glasgow Western Infirmary, complaining of complete aphonia and inability to swallow solid food. His appearance and history were suggestive of advanced phthisis. Aphonia and dysphagia had lasted about four months, and cough and dyspnœa about nine months, before which time he had been a healthy man. The laryngoscope showed paralysis of the left vocal cord. No tumour of the chest could be made out, nor any serious disease of the lungs. At the same time there was extreme difficulty in swallowing even fluids, and a soft tube could not be passed through the obstruction. Another prominent symptom was the existence of severe pain in the abdomen, which had existed for two months before admission. The belly was thin and wasted, quite retracted, and no hardness could be detected. The connection between the laryngeal paralysis, the œsophageal stricture, and the abdominal pain presented a problem difficult of solution, and, indeed, it was only possible to speak vaguely of the case as presumably one of malignant disease. *Post-mortem* examination showed the left lung to be firmly adherent at the base. Both lungs had cicatrices at the apices, while there was a small tubercular cavity in the right. A greyish tumour, one and a-half inches in length, chiefly situated in the front wall of the œsophagus, considerably narrowed, but did not entirely surround that canal. The growth was firmly adherent to the parts in front, one portion of its mass involved the glands at the root of the lung, along with the aorta, and to some extent the trachea and bronchi. The left recurrent laryngeal nerve passed into this infiltrated mass, where it was lost, but could be seen emerging behind as a flattened band. The twelfth dorsal vertebra was the seat of a growth, grey in colour. The body of the bone was almost entirely replaced by new growth, and had collapsed, so that its contents formed a projection all round, which posteriorly narrowed the spinal canal to three-sixteenths of an inch. Stomach and intestines thinned and atrophied; liver studded with numerous small white tumours. Microscopically, the tumour in the œsophagus showed collections of epithelium with large nuclei. The epithelial masses could be seen infiltrating and penetrating the tissues of the wall of the œsophagus. The autopsy thus fully accounted for the clinical symptoms. Paralysis of the vocal cord was explained by the direct involvement of the left recurrent laryngeal nerve in the tumour. The pain in the abdomen clearly depended on the secondary growth in the body of the twelfth dorsal vertebra. This well-recognised method of dissemination commenced in the medullary substance of the bone.

914. *Leshtchinsky on the Mortality from Measles in St. Petersburg during the period of* 1871 *to* 1888.—Dr. Dmitry V. Leshtchinsky, a St. Petersburg medical officer of health (*Sanitarnyi Vratch*) has recently published a very valuable and instructive contribution to the epidemiology of measles, based on a careful and elaborate digest of official returns and his own statistical investigations, referring to the northern Russian capital, and embracing the period of 1871 to 1888. The main conclusions drawn by the writer from his researches (as well as the study of international literature on the subject) may be given, in brief, somewhat as follows:—(1) As far as Russia is concerned, measles constitute an extensively prevailing endemic disease. [According to the Imperial Medical Department's reports, during the period of 1876 to 1877, as many as 777,111 persons fell ill with the affection in the country, of whom 75,031 (9·6 per cent.) died. In reality, however, both the morbidity and mortality were by far higher.] (2) In the course of the period of 1871 to 1888 the St. Petersburg hospitals admitted 22,094 cases of measles, of which 1,763 (7·9 per cent.) ended in death. The total number of cases of the disease occurring in the town during the period amounted to 88,578, with 7,086 deaths. Of each 1,000 cases of all infectious diseases, 56·1 were those of measles. (3) About 43·4 per cent. of all deaths from measles occurred during the spring, 27·5 during the summer, 19·5 during the winter season, and 9·2 during the autumn, the oscillations coinciding with those in a general mortality during various seasons. (4) The mortality from measles reached its maximum in May, and its minimum in October. (5) The mortality from the malady formed 1·5 per cent of the grand total of deaths, and 5·59 of deaths from all infectious diseases. (6) Amongst adults (above twenty-two years of age) the mortality was comparatively very low, constituting only 0·5 per cent. of all deaths from the disease. (7) The most dangerous age ("the measles age") is the second year of life, its mortality amounting to 34·3 per cent. of all deaths from the disease. As many as 9·25 out of each 1,000 living children of the age are succumbing to measles (the respective figure for all living children under fifteen being 2·1). (8) Another dangerous age is that under one year: as many as 5·7 out of each 1,000 living children of the age die from the affection. (9) After the "measles age" the mortality gradually declines with each year of life. (10) The most formidable complication of the malady is pneumonia, which causes 30·2 per cent. of all deaths from measles. It attacks mainly children under five years, the mortality from the complication attaining its maximum amongst children of from one to two years of age. (11) Gastro-intestinal disturbances form another fatal complication, which similarly attacks especially in-

fants of the "measles age." (12) The mortality from measles in St. Petersburg is but slightly lower than that from small-pox, or scarlatina, or diphtheria. (13) The highest mortality from the endemic is shown by overcrowded districts of the town, inhabited by indigent classes. (14) The amount of rainfall and snowfall appears to have a distinct influence on the mortality from measles: the larger the amount the lower the mortality, and *vice versa*. (15) The school-attendance plays an important part in the propagation of the infectious disease. (16) The infection is also widely diffused through the agency of dealers in rags and second-hand clothes, as well as through that of floor-rubbers with their brushes and rags, who carry on the disease from lodging to lodging. (17) The popular view according to which measles represent an "innocent" and, in addition, an "obligatory" affection, is exceedingly erroneous. Most decidedly, measles is a very dangerous and quite preventable disease, and, as such, must be combated as systematically and energetically as cholera, small-pox, etc. In other words, our struggle against the disease must include such general prophylactic measures as isolation of the patient, a thorough disinfection of his room and linen, etc., etc. There cannot be possibly any doubt whatever that a systematic and careful adoption of such rational precautions will put an end to the wanton wholesale loss of children's lives which are now destroyed by measles, in consequence of the community entertaining the said absurd and ignorant views. VALERIUS IDELSON, M.D.

915. *Ohmann-Dumesnil on a Peculiar Case of Addison's Disease.*— The patient was a man, aged forty-six. He began to feel ill in October, 1889. When seen in February, 1890, there was well-marked bronzing of the skin. The chest was somewhat darker than the back, and the areola around the nipples, the axillæ, perinæum and internatal fold were darker than the general surface. The white of the eyes and the mucous membrane of the mouth were devoid of adventitious pigment. He was somewhat emaciated, felt weak, and complained of pain in the pit of the stomach. The peculiar feature of the case was, that about the middle of the previous December it was noticed that he perspired freely over the whole body, and that the sweat had a most intense and disgusting odour. The whole house was permeated with the smell, which resembled that of carrion. The bromidrosis gradually disappeared, and the amount of sweat diminished. Dr. Ohmann-Dumesnil thinks this co-existence of general bromidrosis with Addison's disease interesting, as showing a profound involvement of the sympathetic nervous system in this case. The general consensus of opinion favours the view that the pigmentation of the skin in Addison's disease is due to disturbed sympathetic innervation. Hyperidrosis and bromidrosis are the result of disturbance of the sympathetic nerves which preside over the functions of the glands of the skin. Two manifestations of an entirely dissimiliar character, and which we are accustomed to study separately, were here coincident and undoubtedly dependent on a common origin.

916. *Anderson on a Case of Aortic Aneurism presenting only Indirect Symptoms.*—The patient was a man, aged thirty-six years, by trade a driller, who was admitted to the Western Infirmary on November 16, 1890, complaining of hoarseness of four months', cough of two months', and expectoration of six weeks' duration. He stated that he caught a chill in the end of June, and two days afterward was attacked with hoarseness. The doctor who examined him could detect nothing in the throat, and he therefore neglected the hoarseness, which remained unchanged. Two months before admission cough began, for which he was "painted" with some external application. This gave no relief, and shortly afterwards he had to stop work owing to the severity of the cough, which was frequently so great as to produce vomiting. Expectoration of a clear, thick sputum also began about two weeks afterward. Since the onset of his illness he has been subject to night-sweats, but there has been only slight emaciation. The bowels are moved twice daily. Appetite good. He had never had any pain in the throat or chest. He suffered from palpitation and shortness of breath—both being worse on exertion and relieved on sitting or lying down. On examination he found indications of commencing consolidation at the right apex, and at the left, prolongation of expiration, with sibilant râles. The expectoration, which was frothy and muco-purulent, contained no tubercle bacilli. Over the whole left lung, back and front, the respiratory murmur was much weaker than on the right side. The heart-sounds were normal. The apex-beat was not displaced, nor was the dulness enlarged. Both radial pulses were equal. The left pupil was dilated and fixed, but the fundus was normal, while the right optic nerve was pale and cupped at its margin. The voice was replaced entirely by a whisper, and the cough was "incomplete" and laryngeal in character. On examination of the larynx the left vocal cord was found to be paralyzed in the cadaveric position. All down the right side of the neck there were the scars of old strumous ulceration. The case was evidently one of intra-thoracic pressure, the cause of pressure being seated at the root of the left lung. The presence of an aneurism springing from the back of the left side of the arch of the aorta was suspected. There was a total absence of physical signs, and as there was evidence of old strumous mischief, he *hoped* that the case might be one of pressure due to enlarged and strumous bronchial glands. The case was, therefore, treated by antistrumous remedies. Under these he gained in weight, but improved in none of his essential, symptoms which remained much as before until the morning of February 4th, when, slightly after midnight, he was wakened by his cough, and sat up in bed. Very soon he spat up a mouthful of blood, and immediately afterward blood gushed in torrents from his mouth, and he was dead within five minutes. On *post-mortem* examination a small aneurism was found, arising from the back part of the thoracic aorta just beyond the arch. It communicated by an oval with the left bronchus, while just above the aperture there was a point, rather larger than a pin's head, at which the bronchial wall was much thinned. The aneurism pressed upon the trachea and left bronchus, and stretched the left recurrent laryngeal nerve. The author calls attention to the fact that the indirect or pressure symptoms often exist with very few physical signs, especially when the aneurism springs from the back of the deepest part of the arch, and he therefore insists on the value of an accurate knowledge and appreciation of the pressure symptoms of intra-thoracic aneurism.

Pharmacology and Therapeutics.

RECENT PAPER.

917. On Salol in Cholera. (*Bombay Med. Rec.*, Sept. 1890.)

918. Kums, Dr.—On Subcutaneous Injections of Ether in Hepatic Colic. (*La Semaine Médicale*, Oct. 8, 1890.)

919. Stern, Dr.—On the Treatment of Urticaria by Iodide of Potassium. (*La Semaine Médicale*, Oct. 15, 1890.)

920. Girand, Dr.—On Salol in the Treatment of Gonorrhœa. (*Thèse de Paris*, 1890.)

921. Schmidt, M.—On Orexine. (*Soc. de Biologie*, Oct. 11, 1890.)

922. Toussaint, Prof.—On an Elixir for Infantile Dyspepsia. (*Bull. Med.*, November 9, 1890.)

923. Harkin, Dr.—On the Treatment of Cholera by Stimulation of the Vagus. (*Indian Med. Gazette*, Oct. 1890.)

924. Bartholow, Dr. Roberts.—On Ethyl Iodide and Calomel in the Treatment of Pneumonia. (*American Journal of the Medical Sciences*, Nov. 1890.)

925. Egasse, M. Ed.—On Aristol. (*Bull. Gén. de Therap.*, Oct. 15, 1890.)

926. Pomerantz, Dr., and Koritschoner, Dr.—On the Clinical Use of Diuretine. (*Bull. Gén. de Therap.; La Semaine Méd.*, Oct. 15, 1890.)

927. Murrell, Dr.—On Guaiacum as a Purgative. (*Med. Press*, Nov. 5, 1890.)

Art 917. *On Salol in Cholera.*—In an editorial, this paper gives some further and diverse experiences of salol in cholera, following upon previously published statistics by Dr. Nicholson, and reporting eighteen cases successfully treated by that drug in various stages of the disease. Three observers have recorded results. Surgeon Hehir, of Hyderabad, says he treated all cases of cholera admitted into the Cholera Hospital at Chudderghat with salol, and every case recovered under that treatment. He claims a shortening of the period of convalescence and an absence of uræmic symptoms. Unfortunately, details as to number of patients and prominent clinical features are omitted. The general dictum, however, is strongly in favour of salol. Surgeon Stevenson, of the Medical Staff, Calcutta, reports its use in four cases, all of which ended fatally. Two of them could not be compared with Dr. Nicholson's cases, owing to want of uniformity in the method in which the drug was administered, both as to stage, interval, and dosage. The third series were those of Surgeon Walsh. He lost eleven out of fourteen cases treated in hospital with salol, exactly in the way described by Dr. Nicholson. Dr. Walsh observes that Professors Hueppe and Lowenthal "have added one more to the number of medicines that will *not* cure cholera." The article concludes with the observation that these experiments are still insufficient to justify a verdict either for or against salol as a remedy for cholera.

918. *Kums on Subcutaneous Injections of Ether in Hepatic Colic.*—The writer, a few months ago, published a paper describing the successful results of this method of treatment in various forms of neuralgia. He has found, in two cases, that subcutaneous injection of ether are most effectual in relieving hepatic colic. In one of these cases, two injections over the region of the liver, one administered at mid-day and the other in the evening, and repeated next day, caused great relief. The symptoms of jaundice, however, persisted, and fifteen days later a fresh attack of hepatic colic occurred. Under the influence of fresh injections of ether, the pain entirely ceased, the jaundice disappeared, and no further symptoms had occurred two months later. In the other case, the treatment was even more quickly successful. Injections, administered morning and evening for two days, were quickly followed by complete disappearance of pain and of jaundice. Kums recommends the use of Hoffmann's Anodyne the spt. etheris B.P., a mixture of sulphuric ether. and alcohol in equal parts, instead of pure ether, as he believes that it is more easily absorbed by organic tissues containing water when mixed with alcohol, than when injected alone, and that it therefore acts more rapidly.

919. *Stern on the Treatment of Urticaria by Iodide of Potassium.*—Urticaria being of tolerably frequent occurrence in asthmatic subjects, and these patients being often benefited by iodides, it has occurred to Dr. Stern, of Maronheim, to experiment with iodide of potassium in cases of chronic urticaria, not complicated with asthma. He has thus treated five patients with success, four being affected with urticaria more or less inveterate, and rebellious to all previous therapeutic measures (salicylate of soda, atropine, quinine, tincture of strophanthus, hydro-therapeutic treatment). The fifth case was one of acute urticaria of a few days' duration. None of the patients were syphilitic, and all were rapidly cured. In one case, which had lasted four months, the intolerable itching disappeared on the second day of treatment, and a complete cure was obtained after two and a-half drachms of the remedy had been administered. In two other cases of much longer duration (two years and a-half and six years), the effect of the iodide was equally good, a complete cure being obtained after the administration of six and eight drachms respectively. In the acute case, and in a chronic relapsing case of thirteen years' duration, the action of the iodide presented the peculiarity of at first increasing the pruritus; but this effect was merely temporary, and a successful result was obtained in each case after the administration of seventy-five grains of the drug. These cases, although they are only five in number, seem worthy of attention, more especially as Erasmus Wilson long ago published a case of chronic urticaria, which he had treated in the same manner with success.

W. A. FitzGerald, M.D.

920. *Girand on Salol in the Treatment of Gonorrhœa*—According to the writer's experience, salol diminishes the discharge and lessens pain and inflammation. It is well supported in doses of from sixty to seventy-five grains daily. It is also of service in gonorrhœal rheumatism.

921. *Schmidt on Orexine.*—According to this latest report of M. Schmidt's (Nancy), orexine, far from being a harmless stomachic, would appear to be not only devoid of digestive properties, but toxic. It is stated that the drug may produce death by arrest of respiration, with previous convulsions and lowering of temperature.

922. *Toussaint on an Elixir for Infantile Dyspepsia.*—During the hot weather of the past summer, Dr. Toussaint had a good deal of trouble with the digestive disturbances occurring in newly-born infants. Nothing proved as efficacious as a teaspoonful of the following "elixir" after each allowance of milk, whether maternal or otherwise, viz.: papain, 50 cg.; lactic

acid, 2 grammes; tincture of vanilla, q.s.; simple syrup, 50 grammes; and water, 150 grammes.

923. *Harkin on the Treatment of Cholera by Stimulation of the Vagus.*—The author has brought to the notice of the Indian Government his plan for treating cholera by means of the stimulation of the vagus. The treatment in itself is simple enough, consisting merely in the application of blistening fluid behind the right ear. From a consideration of the phenomena of cholera, Dr. Harkin arrived at the conclusion that in the inordinate action of the sympathetic we have an explanation of the violent purging, cramps, and other characteristic symptoms; and he argues from known physiological effects of the relations between the vagus and the sympathetic to the trial of the remedial measure above stated. Certainly the cases cited by him are striking instances of the rapidity and efficiency of his plan in severe choleraic diarrhœa, and it is incumbent upon those who have to deal with the graver malady to prove the value of Dr. Harkin's recommendations. Formerly, in the diarrhœal stage, Dr. Harkin says he employed the routine plan of absolute rest, warmth, counter-irritation to the abdomen, liquid diet, and the administration of sulphuric acid and opium. Now, when at liberty to do so, he discards all internal remedies, and merely applies "some epispastic fluid with a camel's hair pencil, commencing behind the ear, and extending in the course of the pneumogastric nerves as far as the angle of the lower jaw." The result is that the purging at once ceases, the patient often falls asleep and awakes cured, long before the vesication takes full effect. In the second and algide stages the same good result is said to be experienced.

924. *Bartholow on Ethyl Iodide and Calomel in the Treatment of Pneumonia.*—The author points out that the various treatments of pneumonia may be arranged under three heads: the expectant, the symptomatic, and the specific. Among "specifics" he ranks ethyl iodide, which he administers by inhalation. The manner of conducting the inhalation consisted in dropping the requisite dose (♏ xx.–ʒss.) on a folded handkerchief lightly laid over the mouth and nose, by the patient if able to do so, or by the nurse when necessary. No complaint was made of the action except some dizziness, and this occurred in a few only. As full an inspiration as the patient can make is then practised, and the vapour, thoroughly diffused through the air, glides into the ultimate air-sacs, whence, also, it passes into the blood The influence exerted by it on the cough, the laboured breathing and general *malaise* is a remarkable fact. It has the signal advantages that no apparatus is required, it vaporizes at ordinary temperature, it causes no irritation of the mucous membrane, and it does not act as an anæsthetic. The physiological actions of ethyl iodide are antiseptic and depurative or eliminant. Although as an antiseptic it does not stand very high, the author maintains that its effect is an example of the parasiticide effect exerted by weaker antiseptics against the most resistant microbes. Another remedy which he has found of exceptional value is calomel, but it must be given judiciously. Three grains at a dose, given two or three times at the outset, have proved sufficient. It relieves the biliousness present in all cases of true croupous pneumonia, diminishes the fever, and acts as a diaphoretic. This effect he attributes to its action on the liver. When delirium is present, he gives chloral hydrate, and he strongly insists on the undesirability of forcing food on the patient. He urges that small quantities only of suitable nutritive fluids should be given not oftener than every three or four hours.

925. *Egasse on Aristol.*—There have been many conflicting opinions as to the value of this comparatively new rival of iodoform, and M. Egasse gives an admirable *résumé* of the claims which have been made for it. Aristol has proved no exception to the rule regarding most new remedies—too much has undoubtedly been claimed in its favour; but, like the rest, it seems about to take its proper place as a remedial agent. As an instance of the conflicting opinions which have been expressed, we give the following:—M. Fournioux and Professor Quinquand attribute to aristol undoubted antiseptic properties, finding that even in small quantities it prevents the formation of suppurative microbes. On the other hand, Neisser states that the drug is not an antiseptic; and Haller reported to the Berlin Society of Dermatology that when introduced into culture-media it exerted no influence on the growth of staphylococcus aureus. As an application in cases of lupus (tubercular), aristol has been highly recommended. In this connection M. Egasse points out that any good results obtained were only seen in cases in which a very thorough curetting was also performed, and a careful examination of the published cases will raise great doubts as to its utility in this disease. Observers are, however, agreed that as an application to wounds aristol may well replace iodoform, possessing over the latter the advantages of equal efficiency, absence of smell, and feeble toxicity. In simple or varicose ulcers, too, it has been used with great success, and has given good results in cases which failed to progress under any other treatment. In the treatment of psoriasis there seems no doubt that aristol will prove a most valuable remedy. Its action is said to be as certain as that of chrysarobin, and, while the cure is slower, it is effected without much staining of skin or garments, and without producing any irritation. For this purpose the drug is employed either as a ten per cent. flexile collodion, or as an ointment: ℞ aristol, 10 grammes; ol. olivæ, 20 grammes; lanoline, 70 grammes. On the whole, then, we gather from M. Egasse that aristol may be welcomed as a useful addition to our resources, and, while of doubtful or negative efficiency in many cases, should be allowed to replace iodoform to a large extent.

926. *Pomerantz and Koritschoner on the Clinical Use of Diuretine.*—These two contributions to our knowledge of the action of the new diuretic, sodio-theobromine sodium salicylate, or "diuretine," are valuable in that they justify to the fullest extent further experiments with the drug. It will be remembered that the first reports on diuretine were published by Dr. Christian Gram (Copenhagen) (*Therap. Monat.*, 190, No. 1). This author pointed out that *caffeine* has a double action: (1) stimulating the vasomotor centre, producing vascular constriction; and (2) stimulating the renal epithelium, producing diuresis. The second action might, however, be entirely masked by the first, in which case no diuresis would result. He found that if the vasomotor stimulation was obviated by the simultaneous use of a narcotic, such as chloral or paraldehyd, then the diuresis was much greater. On the other hand, *theobromine* had no vasomotor stimulant action, affecting, according to Von Schröder, only the renal epithelium. Trial of this drug in the

form of "diuretine" proved it to be a most powerful diuretic. The average daily dose was about ʒiss. The conclusions of Dr. K. Pomerantz are similar to the above, but include some cautions as to the use of the drug in certain conditions. They are as follows: (1) fifteen grains of diuretine, given every three hours, act much more powerfully than caffeine; (2) the diuretic action is rapid, and lasts two or three times as long as that of caffeine; (3) cardiac force is unaffected by the drug; (4) patients do not easily become tolerant of the drug, which is efficient even after prolonged administration; (5) no effect is observed on the central nervous system; (6) micturition is neither difficult nor painful; (7) the drug must, however, be given with caution in cases of cardiac degeneration, especially if there be albuminuria. Finally, according to this writer, diuretine is useful in dropsy if diuresis is possible, but, owing to its mode of action, is seldom of avail in advanced renal disease. Dr. Koritschoner gives a still more favourable report. He used the drug in thirty-eight cases of general dropsy from various causes, in the clinic of Prof. von Schrötter, at Vienna. It was given in solution, warm (not boiling) water being used as the solvent; the smallest efficient dose was ʒi.—ʒiss., and the maximum ʒij. — ʒiiss., in twenty-four hours. It was found advisable to avoid administering it at times when much free H Cl. was to be expected in the stomach, as under these circumstances the drug was not easily absorbed. If necessary, however, a draught of alkalinised milk might precede the medicine. Unpleasant symptoms, such as nausea and vomiting, were very rarely observed, even in the cases of chronic Bright's disease. In one or two cases some collapse was produced, but this was due to the too rapid removal of fluid, just as is sometimes the case if a serous effusion is too quickly drawn off by surgical means. Failure occurred in only five cases, and in these disease was very advanced before treatment was commenced. As there is a risk of too rapid diuresis being produced, Dr. Koritschoner advises that the initial dose should not exceed ʒi. in twenty-four hours, to be gradually increased by fifteen grains till the diuresis is well established. From this time the dose may be gradually reduced, or even in some cases discontinued, as the effect seems, when once started, to be often continued without further administration, especially in cases of cardiac dropsy. In the cases of Bright's disease, "diuretine" was by far the best remedy, and often succeeded in relieving the œdema when all else failed. Sometimes, although diuresis was not produced, a serous diarrhœa (3li. — 4li. in twenty-four hours), which ceased as soon as the drug was discontinued. proved equally efficacious in reducing the œdema. In cases of acute Bright's disease, blood and casts rapidly disappeared from the urine. In conclusion, according to Dr. Koritschoner, diuretine is a valuable remedy in all cases of dropsy without distinction, and if administered with the precautions mentioned above, no untoward effects need be feared.

927. *Murrell on Guaiacum as a Purgative*—The author points out that in our thirst for new remedies there seems to be a danger that some of our good old-fashioned drugs may be forgotten. Take guaiacum for example. In most of our text-books on materia medica we are told that guaiacum resin acts as "a stimulant, diaphoretic, and diuretic." He has, however, been unable to find that there is much evidence in support of this view. Wood, of Philadelphia, seems to be of the same opinion, for he says: "Guaiacum is believed by some to act as a diaphoretic, and to do good by increasing the elimination of the skin, but as I have not been able to obtain either from medical literature or from the exhibition of the medicine any distinctive proof of its having any such action to any marked extent, I have preferred to consider the drug as an alterative." He is inclined to think that its main action is as a laxative or purgative, and this view is evidently shared by Dr. C. D. F. Phillips, who, in his well-known work on the "Vegetable Kingdom," states that in large doses it produces "dryness in the mouth, burning in the throat, a sensation of heat in the stomach, loss of appetite, heartburn, flatulence, nausea, vomiting, and purging." The author's attention was drawn to the subject, some two years ago, by casually prescribing for a city man suffering from rheumatism some guaiacum lozenges made up with black current paste. He continued taking them long after the pains had ceased, and his explanation was that they did him good by acting on the liver and bowels. He said that one or two of the lozenges taken in the morning before breakfast acted promptly and without inconvenience. The author ordered the lozenges for others of his patients suffering from constipation, and what is conventionally called "biliousness," and the result was equally satisfactory. The lozenges not being available for hospital use, he had a confection prepared containing ten grains of guaiac. resin to a drachm of honey. This was curiously popular with the patients, and for the last two years he has used it extensively not only as a purgative, but in the treatment of chronic rheumatism, sciatica, tonsillitis, dysmenorrhoea, and allied affections. The confection is nasty, but is appreciated by patients. At first he gave it in drachm doses once a day, but they were not satisfied with this, and he had to increase the dose to two drachms three times a day. In this quantity it seems capable of producing the maximum of inconvenience and discomfort, and gives unlimited satisfaction. The purgative effect is very pronounced, and in one case the patient had fifty-six evacuations in the week. In another case it produced a well-marked rash, covering the arms and legs with an eruption which forcibly reminded one of copaiba. That this rash is rare may be gathered from thefact that his colleague, Dr. Colcott Fox, had seen only one similar instance. It was accompanied by intense itching which disappeared on discontinuing the drug. The guaiacum not infrequently gives rise to a burning sensation in the throat, and to obviate this he prescribed ten grains of the resin in half-an-ounce of extract of malt, which answered admirably. He believes that a trial of the guaiacum resin as a laxative or purgative, according to the dose employed, will be found satisfactory. It is possible that if the drug were triturated with cream of tartar, sugar of milk, or some other equally inert substance its efficacy would be increased, and it would produce the desired effect in smaller doses.

Gynæcology and Obstetrics.

RECENT PAPERS.

928. **Borshtchoff, Dr. P. D.**—On Two Cases of Congenital Anhysteria. (*Meditzinskoïë Obozrenïë*, No. 10, 1890, p. 933.)

929. **Wallace, Mr. J. R.**—On a Case of Double Vagina, Double Uterus, one impregnated, the other menstruating. (*Bombay Medical Record*, Sept., 1890.)

930. YOUBERT, DR.—On the Pregnancy and Delivery of a Girl, aged Thirteen. (*Indian Med. Gazette*, Oct. 1890.)

931. HUMPHRY, DR.—On a Case of Removal of Ovaries and Fallopian Tubes for Uterine Fibroid, with Menorrhagia—Tetanus—Death. (*Australian Med. Gazette*, Sept. 1890.)

932. MCARDLE, DR.—On Two Cases of Vulvar Hæmorrhage in Infants. (*Med. News*, Oct. 18, 1890.)

933. REYBURN, DR. ROBERT.—On a Case of Vaginal Lithotomy. (*Med. News*, Oct. 25, 1890.)

934. KEPPLER, DR.—On the Results of Castration in Women.

935. RENNIE, DR. G. E.—On a Case of Sporadic Cretinism. (*Australasian Med. Gazette*, Sept. 1890.)

936. TAYLOR, DR. G. B.—On a Case of Rupture of the Vagina and Escape of the Fœtus and Placenta into the Peritoneal Cavity. (*Med. News*, Oct. 18th, 1890.)

937. MORGAN, DR.—On Two Cases of Spontaneous Version. (*Australasian Med. Gazette*, Sept. 1890.)

938. GARDE, F.R.C.S., MR. H. C.—On a Case of Complete Absence of Vagina. (*Australasian Med. Gazette*, Sept. 1890.)

939. EGAN, DR. P. B.—On a Case of Rupture of the Membranes Twenty-five days before Delivery. (*New York Medical Record*, Oct. 25th, 1890.)

ART. 928. *Borshtchoff on Two Cases of Congenital Anhysteria.*—Dr. P. D. Borshtchoff, of Krasnikovo, reports the following two cases. A married peasant woman, aged twenty-seven, sought his advice on account of advanced pulmonary tuberculosis, which she attributed to her having never had catamenia. According to her statement, when fourteen years old, she had begun to suffer from attacks of headache, giddiness, and cardiac palpitations, which had been recurring at regular intervals, lasting on each occasion from two to seven days. Subsequently (in a year and a-half or so) the attacks ceased to come. On examination, her mammæ, pubic hair, clitoris, urethra, and major labia were found to be normal. The rima pudendi was rather short, the minor labia very small, pale, and flabby, the navicular fossa shallow. There were present myrtiform caruncles of ordinary size and appearance, but the vagina proved to form a perfectly smooth *cul-de-sac*, three or four centimètres long. A most careful combined examination through the vagina, rectum, abdominal walls, and bladder, failed to detect any trace of either womb or ovaries. Shortly afterwards the woman died from the pulmonary disease. Unfortunately, no necropsy was allowed. The other patient, a robust young married peasant woman of a "distinctly female habitus," applied with complaints of headache, hazy vision, dragging pains about her neck, back, and loins, and aching pains about her legs, all of which symptoms had been recurring, for some time past, every four weeks, lasting each time for about four days. Her breasts were developed perfectly normally, the pubes covered with abundant hair, but the clitoris was of a diminutive size, the genital slit very short, the major labia undersized and flabby, the minor very large and overlaying the former, the myrtiform caruncles red, fleshy, and strikingly hypertrophied (as if constituting another pair of minor labia with ragged free edges), the vaginal orifice narrow, the columnæ rugarum nearly absent, and the vagina converted into a blind pouch, measuring in length about six centimètres. Not the slightest sign of womb or ovaries could be made out. Neither of the women had any sexual appetite, or any voluptuous sensations on coition.

VALERIUS IDELSON, M.D.

929. *Wallace on a Case of Double Vagina, Double Uterus, one impregnated, the other menstruating.*—J. M., aged twenty-nine, healthy, came under treatment with the following history. She was married nine months previously, and menstruated normally for two months, after which time the discharge became much diminished and lasted one day only,—a state of affairs which has since persisted. There were all the usual symptoms of pregnancy, including quickening in the fourth month. Nine months after marriage the patient went a long journey, and was attacked with severe pains and a free discharge of blood and clots. Mr. Wallace was then called in. Examination showed a falciform septum at the vulvular orifice, thick as the little finger, and which medially divided the vagina in its whole length. By the insertion of two fingers, one in each canal, and the use of bimanual pressure, the presence of two distinct *cervices uteri* was demonstrated. Abdominal palpation showed a large tumour (the impregnated uterus) with an axis pointing from the left hypochrondrium to the right iliac fossa, and reaching upwards as far as two inches beyond the umbilical line. The uterus was hard, but the fœtal movements could be clearly felt through the parietes and a cranial presentation made out. The os was soft and spongy, the cervix undilated, and the appearance generally corresponded with the seventh month of impregnation. The os in the *right* vagina, on the other hand, was small and somewhat spongy, but gave no evidence of impregnation. The uterus on this side resembled, as it was afterwards described by a consultant, "a muscular mass on a muscular cyst," the size of a small orange. The blood was found to be coming from this right, or unimpregnated uterus, and the presence of some shreds of decidual membrane in the clots pointed to menstruation as its cause. The expulsion of an early aborted ovum was another possible explanation. Externally the labia majora and the nymphæ were abnormally large and fleshy, and the clitoris longer and thicker than usual. As regards treatment. the pains were subdued with repeated doses of bromide of potassium and opiate enemata; and, with the exception of some menstrual oozing from the right uterus, every fear of premature delivery was removed. The patient was seen in consultation by Drs. Birch and Goubert, who confirmed points of diagnosis, and agreed in forming a favourable prognosis for the labour. In his remarks on this extraordinary condition, Mr. Wallace says that the interest in all such cases lies in their relation to superfœcundation and superfœtation. Of the latter terms the first implies plural gestation, as in twins or triplets, where more than one ovum is fertilised at once; and the second pregnancies occurring at differing periods, one on top of another. It is in cases of double uterus, in which both organs have been impregnated at different times, that the term superfœtation has been misapplied. It is worthy of note that neither the patient nor her husband had the least suspicion of the malformation. While pregnancy existed in the left uterus, it is possible that the right uterus also became impregnated, and the symptoms of abortion or threatening labour were dependent upon the succesful uterine efforts to empty the right organ. In these cases the patient may become pregnant in both uteri at different periods. In the present case it is a question of some

interest as to whether the thick septum between the vagina will impede labour. The wall is very thick and extends to the vulvular orifice. A further report of the result of accouchement is promised, and can hardly fail to be of interest.

David Walsh.

930. *Youbert on the Pregnancy and Delivery of a Girl, aged Thirteen.*—At a recent meeting of the Calcutta Medical Society, Dr. Youbert related the case of a Bengali girl, aged thirteen, who had been delivered in the Eden Hospital. She was ill-developed, had no hair on the pubes, though the breasts were enlarged, owing to her condition. She had been in labour for thirty hours. The mucous membrane of the passages was of an ashy colour, and the labia œdematous. She was very prostrate, and the head lay above the pelvis. The forceps was applied, but in extracting the child the perinæum gave way, and was badly lacerated into the rectum. It was sutured, but the parts sloughed. The child was still-born. The distance between the anterior superior spinous processes of the ilium was a little under seven and a-half inches, against nine and nine and a-half in well-formed women. The mother said that she had menstruated a year before, and that she had lived with her husband for six months before she became pregnant.

931. *Humphry on a Case of Removal of Ovaries and Fallopian Tubes for Uterine Fibroid, with Menorrhagia—Tetanus—Death.*—The patient was a married woman, aged thirty-two; five children. Fourteen months previously she had a miscarriage followed by severe flooding. Some weeks later some "after birth" was removed from the uterus on two occasions, and the hæmorrhage ceased. Since that time, however, menstruation had been so profuse that the vagina had to be plugged every period. When seen by Dr. Humphry, on June 16, she was blanched and weak. On examination a hardness could be måde out two inches above the pubes, dull on percussion, and the sound entered 2¾ inches into the uterus, which was freely moveable. Uterine fibroid was diagnosed, and at the earnest request of the patient an operation was decided upon. On July 1, he made an incision 2¾ inches long, and removed the ovaries and Fallopian tubes, having first transfixed the pedicle and ligatured with silk. There was very little hæmorrhage, and the appendages were quite free from adhesion. The operation lasted about half-an-hour. The patient was very comfortable up to the 8th, though the evening temperature had been 101° F. She complained of stiffness of the jaw and pain on mastication, and this increased in severity, in spite of injections of phyosygmine and morphine, until deglutition became an impossibility, even by the aid of the œsophageal tube, and death resulted.

932. *McArdle on Two Cases of Vulvar Hæmorrhage*—In September, 1889, Dr. McArdle delivered Mrs. T. of her fifth baby, a girl. At his visit on the morning of September 30, the nurse informed him that the infant had passed blood with every movement of the bowels since the preceding morning, and he was shown five napkins which were considerably stained with blood. He immediately examined the child and discovered that the hæmorrhage came from the vagina, and not from the bowels. At the time of the examination there was about a half-teaspoonful of blood in the vagina and between the labia. This blood was bright-red, and the napkin was stained by it, showing that the flow was continuous. The anus was perfectly clean and healthy. Borated absorbent cotton was ordered to be used, and perfect cleanliness enjoined. At the end of the fourth day the hæmorrhage ceased, and the child has since continued perfectly well. Case II.—On April, 1890, he delivered Mrs. C. T. of her first child, a girl. The labour was tedious, but in other respects normal. Five days later, at the morning bath, blood was discovered coming from the vagina of the infant. The same treatment was adopted as in the preceding case, and in four days the hæmorrhage ceased. The author observes that in each infant the hæmorrhage occurred on the fifth day after birth, lasted four days, and did not return. He is under the impression that the uterus was the source of the hæmorrhage, but of this he was unable to be certain.

933. *Reyburn on a Case of Vaginal Lithotomy.*—Mrs. R., aged thirty-two years, the mother of two children. The patient had suffered for nearly two years from irritation of the bladder, and other symptoms which had been, by the several physicians who attended her, attributed to uterine disease. Her medical attendant, on making a careful examination, had discovered a calculus in the bladder, and believing it to be of moderate size they determined to attempt its removal *per urethram.* The patient was placed under the influence of chloroform and the urethra was fully dilated, so that the index-finger could be introduced, and the bladder thoroughly explored. The calculus was readily found, and an attempt was made by long forceps to remove it from the bladder through the urethra, but it was too large to be removed in this way without great danger of lacerating the canal. Bigelow's apparatus for crushing and removing the stone not being at hand, Dr. Reyburn determined to remove it through the vagina. Introducing the forefinger of the left hand into the bladder through the urethra, the calculus could be plainly felt, and drawing it downward he pressed it firmly against the lower surface of the bladder, when he could feel it impinging upon the roof of the vagina. Keeping his forefinger pressed upon the calculus, he made an incision about two inches in length through the roof of the vagina and coats of the bladder, directly upon the calculus, and thus removed it. The operation was a simple one, and as easy as the opening of an ordinary abscess. Silver sutures were inserted, so as to bring the edges of the wound into opposition, and were passed through the roof of the vagina, also including the walls of the bladder. After rallying from the operation, the patient was sent to her home. The temperature on the day following the operation reached 102°, but after a few doses of antipyrin it fell to normal and remained so. The after-treatment consisted of washing out the bladder morning and evening with a one per cent. solution of boric acid. For two weeks after the operation, the patient suffered from incontinence of urine, due to the dilation of the urethra, but this gradually lessened, and three weeks later the symptom had entirely disappeared. The sutures were removed on the twelfth day, and at that time the incision had entirely closed. One month after operation, the patient had quite recovered, and has remained well ever since.

934. *Keppler on the Results of Castration in Women.*—The author had removed the ovaries in forty-six women. He obtained thirty-nine complete cures, of which, in the greater number, the results were followed for a number of years. The following are the principal physiological conclusions arrived at:—(1) After operations performed for a salpingitis or an in-

flammatory process, there had never followed a flow of blood from the uterus. (2) The conjugate diameter had become progressively shortened, and more especially so when the woman was young; this shortening may reach three centimètres. (3) The uterus had gradually diminished in volume (from eight centimètres to two in the course of years); the vagina is much shorter and more narrow; its mucous membrane has become more pale and the labia major more slender. (4) The breasts have become atrophied and resemble those of a man. (5) The pigmentation of the nipples, of the perinæum and of the anus, has disappeared, as well as the pathological pigmentation (chloasma). The skin has become of a remarkable whiteness. (6) The tendency to general *embonpoint* has not increased. (7) There has been no modification in either of the hairs, nor of the voice. (8) The sexual appetite has remained the same, and is, if anything. more marked in those cases where the operation has been performed near the appearance of the menses. (9) The operation is not an obstacle to marriage; three of his patients have married happily some years since. (10) In those women operated upon during youth for inflammatory affections, one does not notice as a result those numerous troubles which we frequently find in women operated upon for uterine fibroids at a more advanced age. (11) Hæmorrhages due to uterine fibroids are favourably influenced by castration, but the menopause never follows immediately afterwards. (12) Women operated upon for uterine fibroids, when well advanced in life, completely lose their sexual appetite.

935. *Rennie on a Case of Sporadic Cretinism.*—Dr. Rennie showed a marked case of sporadic cretinism in a boy, four years of age, before the New South Wales Branch of the British Medical Association. The family history was as follows:—His mother had been deaf and dumb from youth, but was not born so; her father and mother were both natives of Scotland; all the family were strong and healthy. Father also is healthy; his parents were Scotch — natives of Dundee; his family also were strong and robust. The patient was the youngest but one of six children; all the others were healthy and strong. There was no history to be obtained of any nervous affection, insanity epilepsy, goître, or syphilis in any of the patient's relatives or connections. Nothing unusual happened during the mother's pregnancy. Patient was, as far as can be made out, a strong and healthy child until about the age of ten months; at that time he had an accident, which resulted in a "green stick fracture of the shoulder blade" (?). From that time the child seemed to cease growing and developing, both bodily and mentally, for at least eighteen months. For the last six months, the father thought he had shown signs of improvement. The patient presented all the leading features of cases of this form of idiocy, viz.:—Pale, heavy face, chronic inflammatory lesions of eyelids, flattened nose, thick lips, large tongue, carious teeth, thin coarse hair, short neck, absence of thyroid gland, supraclavicular swellings, very prominent abdomen, with back much curved inwards, large upper and lower limbs, broad swollen thick hands and feet, rough skin. There were no signs of rickets, or of congenital syphilis. General health was good, his only trouble being obstinate constipation. His mental symptoms were few; he could say a few words, such as "no," "don't," "go away," &c.; never *asked* for food. only made signs for it. Very slow in movement, and makes no attempt at imitation; generally good tempered, but occasionally is passionate, though not destructively so. The author observed that he only knew of two other cases in New South Wales.

936. *Taylor on a Case of Rupture of the Vagina and Escape of the Fœtus and Placenta into the Peritoneal Cavity.*—The patient was a married woman, age thirty-nine, multipara, very fat. When first seen, she had been twelve hours in labour. She had a large umbilical hernia, and the uterus was markedly anteverted. The cervix was dilated to the size of a crown-piece, the membranes had ruptured, and the head was resting on the pubic bone. The author endeavoured to replace the uterus, but with doubtful success, and during his temporary absence from the room the patient jumped out of bed. Before she could be got back, severe pains set in, and then suddenly ceased with the sensation of "something giving way." During the preparation for another vaginal examination, she had continuous, slight, colicky pain about the umbilicus, with one or two, not severe, uterine pains. With two fingers in the vagina, the os could not be reached. Passing in the entire hand, the uterus was found well contracted and entirely empty, as after the completion of an ordinary labour. The aperture of the os was transverse, with a shallow notch on the right side. Passing behind the cervix, the finger-tips came in contact with the smooth peritoneal covering of the sacral prominence. There was a large rent in the vagina passing posteriorly half-way to the vulva, and anteriorly to the cervico-vaginal junction and gaping widely at the sides. The rent gave the impression that the tissues had parted transversely across the vaginal vault, and then longitudinally in or near the median line toward the vulva. The rectum was empty. Baring the arm to the shoulder, the hand was passed behind the uterus into the abdominal cavity. The intestines were flaccid, with little or no distention. The feet of the child were found beneath the spleen, the head lying in the left inguinal region, in front of and facing the left uterine appendages. The feet were brought down by traction, and the head elevated by external manipulation, and delivery by the feet was accomplished with little difficulty. The child, which was dead, weighed twelve pounds. The cord was cut, and followed into the abdominal cavity up to the fundus and over and in front of the uterus. The placenta was beyond the reach of the hand, and where the head of the child had been, from whence it was lifted by means of the cord and removed through the vagina. The vagina was irrigated with a 1-in-40 carbolic solution. A long tube was inserted into the peritoneal cavity, and a stream of boiled water was passed through it. No clots were found, and the amount of blood lost was trifling—probably not more than two ounces. Antiseptic precautions were used as far as possible before and after delivery, the surroundings and attendance being, however, such as to render them for the most part futile. After delivery the temperature gradually rose, reaching 102° on the second day, but in the next twenty-four hours falling to nearly normal, where it remained. The pulse (100 one hour after delivery) never regained its normal rate or character, and progressively lost force and volume until the seventh day, when the patient began to have "fainting spells," or "weak spells," in one of which on the tenth day after delivery she died. These attacks were probably cardiac dyspnœa, and death was doubtless due to heart-failure from febrile sepsis.

937. *Morgan on Two Cases of Spontaneous Version.*

—The first patient was a woman of fine physique, aged thirty-two, who had been attended in a previous confinement by the author. Labour on that occasion was singularly abrupt, and was over after only two pains. Knowing this, Dr. Morgan promptly responded to the summons, eighteen months later, to attend her a second time. By the time he arrived labour had advanced to the last stage, and the expulsive pains were most severe. On examination, he found the shoulder presenting and tightly wedged into the pelvis; the right arm extruding, the head at the brim, with the occiput towards the right iliac fossa. The uterine contractions were so terrible that he feared rupture would take place, and jumping on his horse, he rode at a gallop back to the house for chloroform, his absence not lasting more than fifteen minutes at the outside. On his return he found labour just completed by natural process. The child was born as he entered the door, and was lying in the bed. The feet had evidently been expelled first, the head had hardly left the vagina, and the right hand and arm, swollen and turgid, were lying by the side of the head, extended upwards, as if they had passed together with it. The duration of this woman's labour could not have exceeded an hour, and the spontaneous nature of the delivery was caused by the violence of the uterine action.—Case II. was that of a young married woman, twenty-eight years of age, in labour with the first child since forty-eight hours. She was of delicate constitution and nervous temperament. The presentation was very similar to the case alluded to above, right arm extending, right shoulder tightly wedged into pelvis, head resting on brim, etc. An attempt had been made to turn, but finding that impossible, the practitioner in charge of the case had telegraphed for assistance. The patient was too exhausted to admit of chloroform; the pains had ceased, and he feared to attempt version until she rallied; he, therefore, advised the administration of morphia, and a dose of half-a-grain was given by the mouth. Tired with a long journey, he lay down on a sofa, and was awakened in four or five hours to find that pains had returned and labour had recommenced. On examination, the shoulder with the extruding arm was found to have receded, and the breech occupied their place. Delivery was soon completed, but the shock which the patient had undergone was too much for her feeble constitution, and she sank in twenty-four hours from exhaustion.

938. *Garde on a Case of Complete Absence of Vagina.*—The patient was a young Kavaka woman, who suffered so severely, from trouble referred to the genital organs, as to be unable to do her work on the plantation. She was admitted to the Maryborough Hospital, Queensland. She was of medium size and slight build, apparently about sixteen or seventeen years of age, the breasts were well developed and so were the external genital organs. On attempting to introduce the finger into the vagina, only a slight depression or "cul-de-sac" could be felt. There was a tumour about the size of a small orange in the hypogastric region just above the pubis. On bimanual examination, two fingers of the left hand in the rectum, the tumour was found to be moveable, and something like the cervix was made out; a sound was then passed into the bladder, and what perhaps might be termed the vesico-rectal septum could be traced from the depression upwards for a distance of about three inches, where it expanded into the enlargement. As the results of leaving such cases alone are almost necessarily fatal, it was determined to try and make an artificial vagina. Accordingly, on May 18th, she was put under choloroform and placed in the lithotomy position; the bowels and bladder having been previously evacuated, the labia were held apart and a transverse incision made into the septum, the index-finger being in the rectum and a sound held in the bladder by an assistant; and then commenced what proved to be a tedious and tiresome operation. The septum was of a very tough nature and took a lot of breaking down, the finger and handle of scalpel being mostly used, but frequent recourse had to be made to the knife. After opening up the parts to the extent of two inches, he passed a No. 4 needle of an aspirator slowly and with caution, to a further distance of an inch or so, when a few drops of thick, dark fluid began to appear—the needle was held tightly in position, it seemed to be gripped, and would have taken a good pull to have withdrawn it; a tenotomy knife was passed along the needle, one side incised slightly, withdrawn, reinserted, and the other side incised to a similar extent; the knife was then withdrawn and a long probe passed alongside the needle and the latter withdrawn; then, with a pair of dilating forceps, he proceeded to forcibly dilate the passage, which was done gradually, and when the tumour was reached about two ounces of dark treacley fluid flowed out. The index-finger was inserted, the new vagina admitting it freely; the os felt normal, giving one the idea that the fluid had accumulated around the cervix and a little below it, and had pushed the uterus upwards. Carbolized water was used to syringe out the canal, and strips of lint squeezed out of carbolized oil were inserted to keep the raw surfaces apart. The patient was a regular savage, and was difficult to manage, although kept under lock and key; she would not stay in bed, and, in fact, never laid up for a day. While she remained in hospital the same treatment was carried out, viz., syringing and carbolized plugging. On June 12th she menstruated without pain, and was taken back by her employer on June 17th. She then had a useful vagina, but the author anticipated that it would contract in the course of time, it being impossible to have anything like treatment carried out on the plantation. The operation as far as possible was carried out on the lines laid down by Dupuytren and Amussat.

939. *Egan on a Case of Rupture of the Membranes Twenty-five days before Delivery.*—The patient was a married woman, thirty-five years of age, strongly built and robust. Had three living healthy children. Since the birth of the latter she had had four miscarriages. No cause could be discovered for these "mishaps." Her last menstrual period occurred about December 20th. She was taken with labour pains on the evening of August 17th next following. These were succeeded in a few hours by rupture of the membranes, and the escape of a large quantity of liquor amnii. On examination during the evening the os was found to be dilated to the size of a dollar, and the head presenting. Descent was not yet sufficiently advanced to enable the position of the occiput to be determined. Later in the night the posterior fontanelle was plainly discovered toward the left acetabulum, with the sagittal suture running backward to the right side. As the pains continued to be dilating in character, but little advance was made. The patient was assured that everything was progressing favourably, but that delivery would probably not take place before the next day. On the following morning the

occiput was no longer within reach. Later in the day it became again discernible. Dilating pains continued at frequent intervals. A small quantity of blood-stained mucus escaped, but no membranes were discoverable. In the evening the patient was given half-a-grain of morphia in four doses. This produced a night of complete rest. On awakening in the morning, she found the pains had vanished. From this time until September 11th, the woman attended to the lighter household duties. She suffered from occasional pains, especially during the night. These were situated over the lower part of the abdomen, and were said to be like feeble labour pains. On the morning of the 11th they became more severe. Examination showed the head presenting as before, in the L.O.A. position. About 10 p.m. the pains became expulsive in character. In one hour a girl was born, weighing six and a-quarter pounds. Her body was covered with a large amount of vernix caseosa. Her lips were quite purple, but she immediately began to cry with exceptional vigour, and has since continued healthy. A small quantity of water drained away with the more severe pains, but no membranous bag formed at any time. The author points out that the differential diagnosis in this case rests between premature rupture of the membranes and hydrorrhœa gravidarum. The fact that the waters came away in a gush under expanding pains; that it was followed by a bloody, mucous discharge; that it again appeared in small quantity, having probably transuded under the pressure of the severe pains; that "nature's wedge" was absent during delivery; and that, finally, on the first occasion the presentation and position were twice discernible as they have never been to the writer, with the membranes unruptured, led to its diagnosis as above.

Diseases of the Nervous System.

RECENT PAPER.

940. Erb, Prof.—On Thomsen's Disease, Myotonia Congenita. (*Centralb. f.d. klin. Wiss.*, 1890, No. 15.)

Art. 940. *Erb on Thomsen's Disease, Myotonia Congenita.*—To the known cases of this disease, Prof. Erb adds five from his own observation, which, in the clearest manner, showed the myotonic reaction described by him. In three of the cases, moreover, the rhythmic wave-like contractions, by the constant current, were very evident upon the employment of some technicalities (a certain strength of current, application, increase and decrease of current, proper position of electrodes, slight shifting of the same, &c.) It is a constant, if not otherwise an especially valuable, sign of Thomsen's disease. Its trophoneurotic origin appears more plausible than before.

Epidemiology.

RECENT PAPER.

941. Stickler, Dr. J. W.—On Foot-and-Mouth Disease in its Relation to Human Scarlatina as a Prophylactic. (*New York Medical Record*, Sep. 10, 1890.)

Art. 941. *Stickler on Foot-and-Mouth Disease in its Relation to Human Scarlatina as a Prophylatic.*—In December, 1887, Dr. Stickler read a paper before the New York Academy of Medicine on the above subject, based upon his investigations into the circumstances attending outbreaks of severe sore throats in various families, the members of which had been supplied with milk obtained from cows affected with foot-and-mouth disease. He now published his further researches in the same subject. The chief epidemic investigated by Dr. Stickler was that which occurred at Dover in 1884, and which was the subject of a paper in the *Practitioner*, by Dr. M. K. Robinson, Medical Officer of Health for East Kent. In this epidemic no fewer than two hundred and five persons were attacked in one week, the most prominent symptoms being inflammatory sore throat and enlargement of the lymphatic glands. It was observed that in eight different families every member was attacked, except those who had previously had scarlet fever. All the members of these families had alike partaken freely of milk believed to be infected with the contagion of foot-and-mouth disease. In other families sixteen persons, who had had scarlet fever, were attacked with the "throat epidemic" in a mild form. The tendency to suppuration of the tonsils and enlargement of the cervical glands in persons attacked during the epidemic suggests the idea that scarlet fever and foot-and-mouth disease closely resemble each other. In his recent paper, Dr. Stickler inclines to the opinion that the two diseases are "more closely allied to one another than has heretofore been supposed to be true; and that it is probable that an individual who has had one disease, either will not contract the other on exposure, or will have it in a very modified form." He is strengthened in this opinion by the results of three inoculation experiments. Three children, aged four, eight, and ten years respectively, were inoculated with virus taken from animals affected with foot-and-mouth disease, and afterwards exposed to scarlet-fever contagion, without developing any symptoms of the latter disease. A larger number of experiments than this are necessary in order to draw any positive conclusions; but the facts brought forward by the author certainly appear to warrant further experiments and investigations, to determine whether scarlet fever and foot-and-mouth disease are or are not mutually protective.

Bacteriology.

RECENT PAPER.

942. Popoff, Dr. Ivan P.—On the Bacteriology of Influenza. (*Meditzinskïa Pribavlenïa k' Morskomïi Sbornikü*, No 8, 1890, p. 97.)

Art 942. *Popoff on the Bacteriology of Influenza.*—Dr. Ivan P. Popoff, of Nicolaiev, states that he has succeeded to isolate what he thinks to be the pathogenic microbe of influenza. On a bacteriologic examination of blood from two typical cases of *la grippe*, during the last pandemic, he discovered peculiar, straight or curved, very mince, rod-shaped bacteria of varying length, which readily grew in "agar-agar-glycerine-meat-peptone-jelly," but somewhat more slowly in meat-peptone-jelly alone. To study their pathogenic properties, the author performed tracheotomy (under all antiseptic precautions) in three rabbits, and introduced the cultures into the animals' windpipe. In every one of the rabbits the inoculation was rapidly followed by fever (up to 39·6° C.) of from three to nine days' duration, accompanied by anorexia, conjunctival congestion, and tracheal whistling *râles*. The examination of blood from the animal's ear revealed the presence of the same bacilli as had been detected in the said human patients. On the necropsy of one of the rabbits killed on the fourth day of the symptoms, there were found "a fairly intense congestion of the tracheal mucous membrane, and numerous white round nodules of the size of a pea, scattered over the kidney and, especially, liver." [No further details concerning the "nodules" are adduced.—*Rep.*] The writer feels sure that the affection, induced in the animals by the inoculation, was nothing else than a genuine influenza. The symptoms, he thinks, could not possibly be attributed to the tracheotomy, since "the wound always completely healed in one or two days, while fever, etc., lasted much longer." [Anyhow, one cannot help thinking that the scanty facts, announced by Dr. Popoff, are exceedingly far from justifying any positive conclusions.—*Rep.*]

VALERIUS IDELSON, M.D.

Syphilography.

RECENT PAPERS.

943. POSPELOFF, PROF. ALEXEI I.—On Syphilitic Re-infection. (*Meditzïna*, Nos. 48 and 49, 1890, p. 389.)

944. TAYLOR, DR. R. W.—On an Unusual Source of Syphilis. (*Philadelphia Med. and Surg. Reporter*, Sept. 1890.)

945. TAYLOR, DR. R. W.—On a Case of Second Infection with Syphilis, and a Case of Syphilitic Infection in a Person Hereditarily Syphilitic. (*New York Medical Record*, Oct. 15th, 1890.)

ART 943. *Pospeloff on Syphilitic Re-infection.*—Prof. Alexei I. Pospeloff, of Moscow, details a remarkable instance of syphilitic re-infection which he happened to observe conjointly with Dr. S. I. Elsenberg, of Warsaw. The patient, a gentleman, at present fifty-three years old, had first contracted a Hunterian chancre (on the retro-glandular sulcus) about the end of October, 1882. About December 20th, abundant roseola cropped out, to be followed by intense sore-throat, patches about the mouth, etc. The rash disappeared after fifteen or sixteen mercurial frictions, the remaining symptoms subsiding about March, 1883. In May a recidive (in the form of psoriasis palmaris) occurred, to yield to the usual specific means in a few months. Notwithstanding a complete absence of any further syphilitic manifestations, the gentleman continued to undergo occasional courses of a specific treatment for a couple of years. In 1886 the patient married (with the author's permission) a healthy woman, who, nine months later, was delivered of a fine healthy infant. On December 15th, 1889, in his wife's absence, the gentleman had a coition with a woman "of unknown health." On January 12th, 1890, he first noticed two dry ulcers, situated just above the penis' root. On examination on January 26, the author recognised typical hard chancres. There was also found an indolent enlargement of the inguinal glands on both sides. When seen again, on April 14, the patient proved to be suffering from syphilitic balanoposthitis, abundant roseola over the body, fore-arms and thighs, polyadenitis, erythematous angina, and patches on the tonsils and about the mouth. On the whole, the lesions on this occasion were more severe than after the first infection. [The same was observed in Dr. Razümoff's case, *vide* the *British Journal of Dermatology*, August, 1889, p. 350.—*Rep.*] This is the ninth case of an undoubted syphilitic re-infection seen by Prof. Pospeloff in the course of his practice.

VALERIUS IDELSON, M.D

944. *Taylor on an Unusual Source of Syphilis.*—In the course of a clinical lecture, Dr. Taylor exhibited a woman who had contracted syphilis in an unusual manner. She was twenty-four years of age; had a healthy child, and had shown no evidence of syphilis prior to her admission to the hospital ten months before. She had been married four and a-half years, and had come under treatment for some ovarian condition. Laparotomy had been performed, and at the time of the first dressing, one week after the operation, the strips of plaster were taken off the wound, leaving a raw surface. The latter, instead of healing, became more inflamed and unhealthy-looking, and about seven weeks later other sores broke out upon various parts of her body. At the time of demonstration there was a circular eruption, presumably syphilitic, from its incrustation, colour, and slight amount of scaling. Upon the buttocks and lower extremities were other patches, some of them inflamed. The whole case suggested a typical syphilitic manifestation, and the eruption was, in the main, a papular syphilide. The lecturer concluded that the virus must have been conveyed to the raw surface left by the plaster, either by instruments, the plaster, or by the hands of the dresser. He recalled a case in which a medical man touched a slight excoriation on the glans penis with a short piece of nitrate of silver, which was worn down to the level of the caustic-holder. The patient developed syphilis not long afterwards, and it was probable that the source of infection was the caustic-holder. All such applications should be made by means of wooden toothpicks (or matches), which can be thrown away after use. If more convenient, the ends can be covered with a piece of cotton wool.

945. *Taylor on a Case of Second Infection with Syphilis, and a Case of Syphilitic Infection in a Person Hereditarily Syphilitic.*—Dr. Taylor gives detailed histories of the two cases, which had come under his observation within a year. The first was in a sickly looking woman, aged thirty-eight, who entered Charity Hospital in January last. Eleven years ago she had syphilis, having had hard swelling of the external genitals, enlargement of the glands, eruption shortly afterwards all over the body, headache at night. The second year she had rheumatoid pains, mucous patches; the third year serpiginous syphilides, etc. She married and gave birth to two weakly children, which soon died. Her husband dying, she again lapsed in virtue, and turned up in Charity Hospital in January last, broken down in health. There were typical miliary syphilides scattered over nearly the entire surface. All the ganglia were markedly enlarged. There were mucous patches of the tongue and mouth, and evidences of alopecia. She suffered pain in the joints, worse at night. The second attack was

much more severe than the first. She was improving under mercurial treatment. The second case was one of acquired syphilis in a person hereditarily syphilitic. The woman came to him first in 1879, aged nineteen, when he treated her for destructive syphilitic sore on the face, arising from hereditary syphilis, a clear history of which was afterward given him by her mother, who acquired syphilis three months before the child's birth. The child had a rash, condylomata cuta, snuffles, was weakly, etc. Five years after his patient's first visit, 1885, she returned, and had then macula, roseola, and scaling syphilides all over the body; condylomata of the genitals, mucous patches of the pharynx, etc. The infection began in the right labium, and was contracted from the husband. The glands were all enlarged, and there was alopecia.

Dermatology.

RECENT PAPERS.

946. Schwimmer, Prof.—On the Use of Thiol in Skin Diseases. (*Wien. klin. Wochenschr.*, 18; *Brit. Journ. of Derm.*, Sept. 1890.)

947. Van Dort, Dr.—On the Treatment of Lichen Ruber. (*Berlin Wochenschr.*, 27; *Brit. Journ. of Derm.*, Sept. 1890.)

948. Hebra, Dr.—On the Lichen Ruber Question. (*Brit. Journ. of Derm.*, Sept. 1890.)

949. Prentiss, Dr.—On Change in the Colour of the Hair, due to use of Pilocarpine internally. (*Brit. Journ. of Derm.*, Sept. 1890.)

950. Kral, Dr. F.—On the Fungus of Favus. (*Brit. Journ. of Derm.*, Sept. 1890.)

951. Bobritzky, Dr.—On Morbus Maculosis Werlhofii. (*Russkaia Meditzina*, No. 16, 1890, p. 245).

952. Sokoloff, Dr.—On Prurigo as a Family Affection. (*St. Olga's Hospital for Children Reports*, 1889, p. 173.)

953. Duhring, Dr.—On the Treatment of Dermatitis Herpetiformis. (*American Journ. of the Med. Sciences*, June, 1890.)

954. Sehlen, Dr. V.—On Medicinal Suppurations in Skin Diseases. (*Centralbl. f. Bakter. u. Parasitenk.* bd. viii., No. 4; *Monats. f. Prakt. Derm.*, vol. xi., No. 7.)

955. Nielsen, Prof.—On the Appearance of Herpes Zoster during Treatment by Arsenic. (*Monats. f. Prakt. Derm.*, vol. xi., No. 7.)

956. Klotz, Dr.—On Pilocarpine in Dermatology. (*N.Y. Med. Rec.*, Oct. 15, 1890.)

957. Hofrat, Dr.—On the Treatment of Furunculosis. (*Monats. f. Prakt. Derm.*, vol. xi., No. 8.)

958. Swift, Dr., and Montgomery, Prof.—On an Interesting Case of Anæsthetic Leprosy apparently following Vaccination. (*Occidental Medical Times*, Sept.; *Brit. Med. Journ.*, Oct. 25th, 1890.)

959. Walsh, Mr. David—On Dermatitis as an Excretionary Symptom. (*Med. Press and Circular*, Oct. 22, 1890.)

Art. 946. *Schwimmer on the Use of Thiol in Skin Diseases.*—Thiol has been recommended as useful in the treatment of erythema, dermatitis herpetiformis, herpes zoster, acne rosacea and acne vulgaris facial, papular and weeping eczema, burns, etc. A 1-in-3 aqueous solution is generally applied. Professor Schwimmer has found thiol highly satisfactory in treating cases of herpes zoster and dermatitis herpetiformis. The application of this remedy produced healing in the course of a week in a case of dermatitis herpetiformis, which had not yielded to treatment with other remedies. The solution was applied regularly twice daily, for two or three days, and the skin carefully washed with pure water. In this space of time the vesicles and bullæ were found to have disappeared, their place being taken by scurfs of thiol. The skin beneath showed moderate pigmentation. Applications of the solution produced good results in erythema exudativum multiforme, but the thiolum siccum pulveratum seemed preferable, the eruption pealing in three to six days, and healing quickly taking place. The liquid form was best adapted to papular eczema. The ointment form of thiol (thiol liq. 2, axung. porc. 20·0) is not quite so agreeable as the solution. There is no unpleasant odour.

947. *Van Dort on the Treatment of Lichen Ruber.*—Dr. Van Dort recommends Lassar's treatment of lichen, which consists in lightly touching the heads of the nodules for a fraction of a second with the finely bent end of the galvano-caustic wire, or with the point of a Pacquelin thermo-cautery. Slight scurf is produced, and the use of a toilet powder on the affected parts is sufficient after treatment. The result is uniformly satisfactory. Intolerable itching is in this way quickly removed, and the disease permanently cured.

948. *Hebra on the Lichen Ruber Question.*—At a meeting of the International Medical Congress, held at Berlin, Dr. Hebra, of Vienna, in a discussion on a case reported by Hava, stated that two forms of disease, lichen acuminatus and pityriasis pilaris, had been confused by his father. On looking over the old record of cases in Vienna recently, he had separated cases of true lichen acuminatus from those of pityriasis pilaris. One case especially, which had been diagnosed by his father as lichen acuminatus, Hebra felt sure was a case of pityriasis (Devergie), the affection disappearing and recurring not less than three times. The patient eventually recovered perfectly.

949. *Prentiss on Change in the Colour of the Hair, due to use of Pilocarpine internally.*—Dr. Prentiss, of Washington, at the meeting of the International Medical Congress at Berlin, read notes on the case of a lady, aged twenty-five, with thin blond hair, to whom almost daily injections of pilocarpine for uræmic symptoms were given. The colour of her hair, in the course of one month, changed to chestnut, and after two months it was a deep black, becoming at the same time much fuller and thicker.

950. *Kral on the Fungus of Favus.*—Dr. F. Kral, of Prague, stated, at a meeting of the International Medical Congress held at Berlin, that he had adopted the following method in order to procure pure cultivations of the favus fungus. The favus crusts were rubbed up with sterilized sand, and thus finely divided; plate-cultures were then made and the fungus isolated. The development could be traced from a single spore. The author arrives at the following results:—(1) The favus fungus is always one and the same fungus. (2) This fungus is morphologically and physiologically (in cultures) different from the fungus heretofore

regarded as the fungus of favus. (3) Its pathogenicity for man is established through successful inoculations. (4) With the fungus from the scalp typical favus of the body was produced. (5) In the experimentally produced favus the fungus described was always the only fungus present.

951. *Bobritzky on Morbus Maculosis Werlhofii.*—Dr. Bobritvky reports two cases in which morbus maculosus welhofii appeared after severe mental shock.

952. *Sokoloff on Prurigo as a Family Affection.*—Dr. Sokoloff reports that in a family of six children, three of them were victims of prurigo. The disease in each case began about six months after birth, increased till the fifth year, and diminished in intensity gradually afterwards. The prurigo was more severe in summer.

953. *Duhring on the Treatment of Dermatitis Herpetiformis.* –Duhring states that many local remedies were tried in a case of typical dermatitis herpetiformis with an unsatisfactory result. Sulphur ointment, two to three drachms to the ounce, and "liquor carbonis detergens," from one to two drachms to the ounce, were most useful. The sulphur ointment was employed with considerable friction, for the purpose of breaking down the vesicles, and several times improvement in the skin and relief from the itching was experienced.

954. *Sehlen on Medicinal Suppurations in Skin Diseases.*—Dr. V. Sehlen examined by the cultivation-process a number of cases at Unna's clinic, in which suppurative dermatitis had been produced by the use of various medicaments. In the first case (lupus faciel treated by $HgCl_2$) no development of fungus was shown on the glass cultures. The same was observed in the second case (pruritus hiemalis treated with tinct. iodi.) and also in the third case (lepra tuberosa treated with pyrogallol). In the fourth case (eczema seborrhoicum treated with pyrogallol) were found numerous colonies of various micro-organisms, which were also observed in the fifth case (trichophytia capitis, treated with chrysarobin.) In those cases which on culture gave negative results, the irritating effect of the medicament appears to be the only cause of the suppuration. The suppuration produced by the medicament is less copious and creamy, but paler in colour and contains no morphologically differentiated suppuration organism. With pyragallol it depends upon the more or less accidental appearance of bacterial parasites of the skin, whether a development of them in the previously formed inflammatory products results, which is not prevented by the medicament. With chrysarobin it is difficult to decide whether the transition to suppuration does not result from the cooperation of pyogenetic organisms. The suppuration is only an increased inflammation. The state of the cutis is also of importance for the appearance of a medicinal suppuration. The idiosyncracies of the skin for certain medicaments are a special expression of the "Individual Disposition."

955. *Nielsen on the Appearance of Herpes Zoster during Treatment by Arsenic.*—Neilsen considers that the relationship between treatment by arsenic and herpes zoster, which has been either doubted or denied by several authors, really exists, and that continued treatment by arsenic under certain circumstances may produce an outbreak of herpes zoster; in other words, that zoster in these cases must be regarded as a medicinal exanthem, although it disappears in the usual manner without the arsenical course being broken off.

956. *Klotz on Pilocarpine in Dermatology.* –Dr. Klotz, in a paper read before the American Dermatological Association, gave a review of the history of pilocarpine in dermatology, and said it had not met with the acceptance which one might have supposed if its therapeutic virtues had been at all proportionate to its diaphoretic qualities. The author has employed this remedy in a few cases, including some of eczema, pruritus of the anus, and affections with dryness and irritation. The result had been such as to encourage him to give it a further trial. It might be given internally, or by hypodermic injection—small doses, long continued. A tenth of a grain was likely to prove sufficient to keep the skin moist.

957. *Hofrat on the Treatment of Furunculosis.*—Dr. Hofrat stated at the annual meeting of German physicians that he had employed in the treatment of furunculosis an ointment composed of equal parts of oxide of zinc and vaseline, with four per cent. of boric acid. In circumscribed furunculosis the application was rubbed in and around the parts affected three times a day. The ointment was applied over the whole body in cases where the affection was universal. Sublimate baths were also employed, if they could be borne by the patient. A case of universal furunculosis was perfectly healed by the treatment in seven weeks. Poultices were employed in treating large furuncles.

958. *Swift and Montgomery on an Interesting Case of Anæsthetic Leprosy apparently following Vaccination.*—Dr. Swift, of Molokai, and Professor Montgomery relate the case of a man, aged twenty-five, born of healthy parents, who has suffered from anæsthetic leprosy for ten years, seven of which he has spent at the Leper Settlement. He has had two brothers and three sisters. One sister, who was affected with tubercular leprosy, died at the Leper Settlement. The man was vaccinated in 1878, and symptoms of leprosy showed themselves about a year later. At the site of vaccination a large anæsthetic scar is now present. During the whole course of his life the patient has been associated with lepers.

959. *Walsh on Dermatitis as an Excretionary Symptom.*—This paper attempts to show that excretory irritation is a not uncommon factor in inflammation of the skin. For this purpose dermatitis is held to include any inflammation of the skin characterised by redness, heat, swelling and pain in various degrees and stages, normal and otherwise. The chief channels of exit of waste from the body are the kidneys, lungs, skin, and alimentary canal. The balance of excretion is maintained under varying conditions by compensatory action of the different organs, whose function is thus largely interchangeable. When accidental or unusual substances are introduced into the blood, they can leave the body by the routes of normal excretion only. The exact channel of exit will be determined by varying states of organic health and activity, by external influences, and by the selective action, amount and nature of the material to be excreted. During elimination the excretory epithelium may escape injury; it may suffer after long exposure only; or, lastly, it may be permanently destroyed. Accidental or unusual substances in the blood are discussed under the headings of (*a*) drugs, (*b*) normal products in excess, and (*c*) specific poisons. Their action is

compared, first, in their selection of one or more channels of excretionary exit, and, secondly, whether in the process epithelium is or is not injured. (*a*) Drugs: sulphur is excreted by all channels without damage to epithelium; cantharidin is slowly excreted by the kidney, which is much injured; arsenic does not affect kidney, but attacks skin and alimentary canal. (*b*) Normal products in excess; *e.g.*, urea, which damages exits all round. (*c*) Specific poisons: (1) chemical, (2) resulting from micro-organisms. (1) Chemical; *e.g.*, rheumatism and gout. The rheumatic poison does not do much injury to excretory epithelium. Gout, on the other hand, is a general irritant, as shown by the accompanying bronchitis, asthma, eczemas, and dyspepsia. (2) Poisons due to micro-organisms and their products. The poison of measles, as a rule, does little damage to epithelium, while that of scarlatina attacks all exits and is highly damaging to their cells, as proved by the accompanying nephritis, peeling of skin, and by the inflammatory conditions of throat, lungs, and alimentary canal. In scarlet fever the dermatitis begins as a minutely punctate rash. On the hypothesis of excretory irritation, a probable explanation is that the poison seeks elimination by the coiled glands, which are thereby inflamed. Perifollicular inflammation follows along with vaso-motor changes that lead to the diffuse rash of the later stages. Mr. Walsh next traces excretory parallels between drugs and disease-poisons. Sulphur and scarlatina poison agree in seeking elimination by all possible exits; but, while sulphur does not inflame epithelium, the scarlatinal virus is highly damaging. The latter may be compared with gout in its general destructiveness to excretory epithelium. It is difficult to find any one drug that does such all-round damage. Iodide of potassium is excreted chiefly by the kidneys. Iodism may be regarded as the expression of its vicarious excretion by other channels, which would account for the rash, coryza, metallic taste in the mouth, and bowel symptoms. The fact of varying elimination partly explains the uncertain action of many drugs, and also the widely differing symptoms of specific diseases. In a gouty patient asthma is common, and often alternates with eczema, or with diarrhœa; in other words, the poison is shifting its channel of elimination. The writer concludes: (1) That dermatitis may be set up in a certain number of cases by the excretion of irritant products from the system. (2) The irritants may be chemical or due to specific micro-organisms. (3) That many of the inflammations of the hypo- as well as of the epi-blastic tissues are simply expressions of excretory irritation. (4) That the severity of the inflammation and consequent damage is in proportion to the specific action of the irritant on excretory epithelium. (5) That excretory parallels may be drawn between drugs and specific disease poisons, both as regards their harmfulness to epithelium and their channels of elimination. That while excretion affords the key to a certain number of skin inflammations, it also accounts for the success of many well-established methods of treatment which aim at shifting the channels of elimination. At the same time it affords a rational basis for further therapeutic measures.

Laryngology and Otology.

RECENT PAPERS.

960. WALLACE, MR. DAVID.—On Two Cases of Laryngectomy. (*Edinburgh Med. Journal*, Oct. 1890.)

961. LEFFERTS, DR. G. M.—On Intubation of the Larynx in Acute and Chronic Syphilitic Stenosis. (*N. Y. Medical Record*, October 4, 1890.)

ART. 960. *Wallace on Two Cases of Laryngectomy.*—Extirpation of the larynx, in cases of malignant disease of that organ, has now been performed considerably over one hundred times; and although only seventeen of the patients operated on have survived for a period exceeding twelve months, yet the better success attending later attempts at relief is sufficiently encouraging to justify them, under suitable circumstances. The latest contribution to the literature of this subject is that of Mr. David Wallace, F.R.C.S.E., who reports two examples of the operation performed by Prof. Chiene, in each instance for epithelioma. The first terminated fatally from septic pneumonia, ten days after the operation, but there were many causes contributing to the event, the patient being excessively reduced by long and harassing illness, and the parts removed very extensive, including the whole of the larynx and the upper portion of the œsophagus; while, moreover, the severe operation of œsophagostomy had been undergone only three weeks prior to the laryngectomy. Another unfavourable factor in the case was that the necessary tracheotomy immediately preceded the more serious proceeding, instead of being performed a fortnight or three weeks in advance of it, as is now very generally conceded to be desirable. The second case described occurred in a man, aged forty-four years: the parts removed were limited by restriction of the disease to the larynx; and tracheotomy had been resorted to nearly three weeks previously for the immediate relief of embarrassed respiration due to the presence in the larynx of the epitheliomatous mass. During the operation for extirpation, passage of blood into the trachea was easily arrested by accurately plugging this tube with a sponge at a point between the wound and the tracheotomy incision below. The subsequent history of the case was one of steady recovery; and it is interesting to learn that six months after the operation the patient could speak in a hoarse whisper which was intelligible to his wife and friends. Mr. Wallace, in this connection, refers to the fact that in two other cases lately reported, speech has been possible after complete extirpation of the larynx, and without the introduction of an artificial larynx.

C. H. WADE.

961. *Lefferts on Intubation of the Larynx in Acute and Chronic Syphilitic Stenosis.*—Dr. Lefferts maintains that intubation offers, in a large proportion of instances, the simplest and most practical means yet devised for relieving the dyspnœa of acute laryngeal stenosis, thus avoiding tracheotomy; and for dilating chronic cicatricial stricture, in its varying grades and forms, thus dispensing with the temporary or permanent necessity of wearing a tracheal canula. He divides into the following seven classes the cases in which the procedure is indicated: (1) The immediate relief of dyspnœa in all cases of acute syphilitic stenosis. (2) Facilitating or hastening, by equitable and prolonged pressure, the absorption of inflammatory effusion or induration. (3) Forcible dilatation and continuous distention of slight and recently organised cicatricial bands. (4) Progressive dilatation, by means of a series of intubation-tubes, of cicatricial strictures of the larynx, subsequently to their incision, by some form of cutting apparatus. (5) Divulsion and progressive

dilatation by such specially adapted intubation-tubes as may be required. (6) In dyspnœa due to abductive immobility of the vocal cords, from fixation of the arytenoid joints by disease within or around them, well-directed pressure by the intubation-tube will exert a favourable influence in promoting absorption, or will finally break down the fixation of the joints. (7) In dyspnœa dependent on abductive paresis, from commencing degenerative processes of syphilitic origin in the abductive muscles themselves, the presence of the tube will stimulate normal physiological movement by preserving the respiratory opening. Dr. Lefferts proceeds to give histories of ten cases illustrating the value of intubation in various forms of syphilitic stenosis. He then goes on to remark that, while intubation in acute syphilitic stenosis is usually readily accomplished, and successfully attains its object, the management of chronic stenosis, so varying in its nature, and indications for treatment, will always require much patience, skill, and ingenuity. In any case, there are certain difficulties in intubing adults, not met with in children. The depth at which the larynx lies in the adult makes it difficult or impossible to guide the tube over the epiglottis with the finger. This is especially true where a tracheotomy-tube has been worn for some time, and the inactive larynx does not rise to meet the finger. The lesions which render the operation necessary in the syphilitic larynx presents a barrier to the easy introduction of the tube. Much delicate manipulation, based upon a study of the requirements of the cases, may be necessary. The laryngeal mirrors may afford aid in guiding the earlier stage of introduction of the tube. The laryngeal mirrors will also be of service in extracting the tube in the adult. Large tubes can be worn safely for two or three weeks without changing. The difficulty in swallowing, which, as in children, is a prominent complication at first, is usually overcome after wearing the tube for a short period. The intubation-tubes constructed for the treatment of laryngeal stenosis consists of a series of ten tubes. The larger are made of hard rubber alone; the medium sizes of brass, gold-plated, with vulcanite heads; the smaller are made of metal only.

J. B. Ball, M.D.

Ophthalmology.

RECENT PAPERS.

962. Charcot, Dr.—On a Case of Ophthalmoplegic Migraine. (*Progrès Médicale*, p. 83.)

963. Hirscherg, Dr.—On New Blood-vessels in the Vitreous. (*Centralbl. f. Prak.* Aug. and Sept. 1890.)

964. Overweg, Dr.—On the Objective Determination of the Refraction of the Eye by Skiascopy (keratoscopy). (*Revue des Sciences Méd.*, Oct. 1890.)

Art. 962. *Charcot on a Case of Ophthalmoplegic Migraine.*—The ocular symptoms that not infrequently accompany migraine are sufficiently well known, but we do not think that the group of cases described in this paper has received the attention which its importance deserves. The attack begins with violent pain in the head, which is accompanied by nausea and vomiting. The pain is like that of ordinary migraine in character, but appears to be always unilateral. The duration of this stage varies, from two to twenty days, in different cases; the pain is either intermittent, or, more commonly, is constant with morning or evening exacerbations. So far, the symptoms do not differ essentially from those of ordinary migraine; indeed, the earlier attacks, which usually come on in childhood, appear to be of this nature. The termination of the painful stage, however, in the peculiar group of cases under consideration, is characteristic. The pain ceases suddenly, as if by magic, and at the same time there is found to be a total paralysis of the third nerve on the affected side, the internal as well as the orbital muscles being implicated. The paralysis may recover in the earlier attacks, but in the subsequent ones the recovery seems to become less and less complete. [As the paralytic symptoms are confined to a single nerve on one side, we cannot think that the term "ophthalmoplegic migraine" is well chosen, the term "ophthalmoplegia" being used in a definite sense quite different to this. We would suggest "paralytic migraine" as more suitable.—*Trans.*] Twenty cases, including the author's, are referred to; short abstracts being given of several. The following, not previously published, well illustrates the course of the affection. The patient, when seen, was a woman of thirty-five, of good constitution and healthy appearance; there was nothing of importance in the family history, nor had the patient, with the exception of the migraine, ever had any serious illness. The first attack of paralytic migraine, occurred at the age of thirty, but since the age of fifteen she had suffered from cephalagia, which was bi-lateral, accompanied by nausea and vomiting, and presented all the features of ordinary migraine; these recurred once or twice a month. These attacks ceased with the very late appearance of the menses, at the age of twenty-three. The first attack of paralytic migraine occurred in February, 1885; the pain affected the right occipital region, soon spreading to the parieto-temporal region, and finally to the orbit. A sensation was then experienced of the eye being drawn backwards into the orbit, and the vomiting, which had been present from the outset, became worse. The pain, which was always worse in the evening, lasted a month, and then suddenly gave place to the paralytic stage, which was indicated by all the characteristic symptoms of paralysis of the third nerve. The paralysis lasted a month, and then entirely disappeared. A second attack occurred a year later; the pain lasted only three weeks, and was then followed by the paralysis, which began to improve after eight days, but, except for a period of intermission to be mentioned presently, never entirely disappeared during the three years the case has been under observation; ptosis and diplopia being always present, but becoming more marked from time to time after attacks of hemicrania and vomiting. Towards the end of 1889, all the symptoms suddenly disappeared without known cause. The period of complete freedom lasted till February, 1890, when the third severe attack occurred. This appeared to be caused by mental excitement, the patient having been suddenly called into the country in consequence of the unexpected death of her father. The painful stage lasted twenty days, all pain then disappeared, and complete paralysis of the third nerve supervened. Like all the previous attacks, it was confined to the right side. The paralytic symptoms began to improve after a few weeks, but had not entirely disappeared at the time of publication (August). As regards the pathology of the affection, there are no autopsies, and the author suggests that the cause of the earlier symptoms is vaso-motor spasm, but that repeated attacks have led to changes in the arterial walls, which modify the nutrition of the nerve elements and lead finally to organic changes in them. The affection of the third nerve is evidently due to a basal and not to a nuclear lesion, from its being complete and exclusive, and attacking all the branches of the nerve simultaneously.

963. *Hirscherg on New Blood-vessels in the Vitreous.*—In this paper the author collects seven cases already published and adds four others. [Three other cases will be found recorded in the *Ophthalmic Hosp. Rep.* 1881.—*Tr.*] He points out that although the condition is so constant in the ophthalmoscopic appearances presented that it must be considered as a definite affection, yet that most of the ordinary text-books on diseases of the eye, including Graefe-Saemisch's *Handbuch*, do not refer to it. In nearly all the cases the vessels appear to have their origin at or near the disc. Thence they spring forward into the vitreous, spreading out in a fan-like manner. The individual vessels are very fine, and most of them can be seen to form loops, returning to their point of origin. At the summit of most of the loops a knob-like swelling can be seen, which in some can be made out to consist of a close spiral twist of the vessel. The vessels are often not supported by any visible membrane, and the vitreous is otherwise clear, or nearly so. The author does not fully discuss the pathology of the condition, but he appears to consider it as altogether distinct from that which has been described as "Retinitis Proliferans," in which as the result of hæmorrhage a bluish-white membrane is formed which not unfrequently contains blood-vessels. But he considers it as in some way connected with hæmorrhage into the vitreous. (1) The earliest recorded case is by Coccius (1859). In this the vessels were discovered in one eye only, after a subsidence of a retinitis which affected both. There were in addition numerous opacities in the vitreous. (2) This case is described and figured by Jaeger in his *Handatlas*. Here also there was neuroretinitis. (3) Described and figured by Nettleship (*Trans. Oph. Soc.*, iv. p. 150.) The patient was a man, aged fifty, who had a primary chancre a year previously, following by secondary symptoms. When first seen, in the left eye there were opacities in the vitreous, and extensive detachment of the retina. In the right eye numerous webs in the vitreous, a good many hæmorrhages on the fundus, chiefly at the upward periphery; also several dark ones apparently in front of the vitreous, near the yellow spot. A week later, it was noted "there is a close network of very small tortuous vessels on the outer side of the disc, and another small patch of vessels on the inner side. Disc pale and hazy." A drawing was made at this stage. Later it was noted that the vessels were supported on a transparent membrane, which appeared to terminate in the vitreous by a free edge which was visible with 4 D, and appeared to be formed by a vessel larger than the others. The hæmorrhages became absorbed, and the vitreous opacities disappeared, the vascular fringe bent over to the nasal side, and two fresh groups of vessels appeared. A second drawing, made six months after the first, illustrates the condition. Later on, a good deal of connective tissue formed about the bases of some of the vascular loops. (4) By the same author (*Tr. Oph. Soc.*, viii., 159); a man, aged forty-eight, who suffered from diabetes. There was retinitis complicated by hæmorrhages. "Over the whole central region the retina œdematous and hazy. Close to the fovea two or three small vessels of medium size suddenly appear in the retina; they cannot be traced to the disc, but appear to spring directly from the choroid. The largest of these traced upwards and downwards is found to divide into a network of minute vessels projecting forward in the vitreous in the form of fine loops, on the summit of some small swellings." (5) (*Trans. Amer. Oph. Soc.*, 1887.) A patient, aged fifty-two, nine months before had had repeated hæmorrhages in the retina and vitreous. In this case the vessels were supported by a semi-transparent membrane. (6) *Ibid.* A similar case mentioned is by Wadsworth. (7) Harlan (*ibid.*, 1889). A man, aged fifty; the fundus slightly blurred, and showed remains of former hæmorrhages. The disc partially concealed by a network of vessels springing forward into the vitreous. Later fresh hæmorrhages occurred, but the vessels remained unaltered. The author has himself seen but four cases in ten years. (*Centralb.*, 1881.) (1) A woman, aged twenty-three. In both eyes there had been choroido-retinitis, with blurring of disc and hæmorrhages. The vitreous having been completely cleared, the vessels were clearly seen, forming fine loops hanging down from the disc. They floated up when the eye was moved, and then slowly sank to their former position. (2) *Ib.* 1883. The vessels were seen in a patient, aged sixty, who had noticed the vision of the eye to be defective a year before. (3) *Ib.*, 1889. A woman, aged forth-seven. When first seen, there were noted small vitreous opacities, *striated* hæmorrhages, bright spots in retina, and redness, and blurring of optic disc. Six months later, there was seen a fine bluish-white membrane projecting 1·5 millimètres into vitreous, and supporting vessels whose arrangement suggested that of the so-called veins on a fly's wing. (4) A woman, aged sixty. Left eye formerly squinted, its vision always defective. Eight days before her visit, clouds before right; when seen v. $\frac{3}{4}$ vf. normal. Hæmorrhagic retinitis. Three months later, a fresh hæmorrhage in middle of retina, and along lower temporal vessel. A week later, cloudness of retina in this situation, with tortuous and dilated veins. Two months later, a large hæmorrhage in lower periphery. Not seen again for a year and seven months. Vitreous cloudy but fundus visible. Springing from the disc in all directions loops of fine blood-vessels, many of the lower ones presenting knob-like swellings at the summits.

W. Adams Frost, F.R.C.S.

964. *Overweg on the Objective Determination of the Refraction of the Eye by Skiascopy (keratoscopy.)*—The author explains a modification of the original method, effected by Schweigger. It is well known that in determining myopia by keratoscopy only high degrees thereof can be thus measured, because, *e.g.*, if the myopia exceed 3 D, the punctum remotum of the patient's eye will be behind the eye of the examiner. Accordingly, Schweigger advises us to place a rather strong convex lens before the examined eye, and thus change a feeble myopia into a strong one temporarily. A myopia of 1 D, with a convex glass 5 D, will behave like a myopia 6 D; the same glass will make an emmetrope behave like a myopia of 5 D; and a hypermetropia of 1 D like a myopia of 4 D. Hence in practice we should, in all cases in which there is not a high degree of myopia, *i.e.*, in all cases in which the shadow does not move distinctly opposite to the

oscillations of the mirror, place before the eye under examination a convex glass of either 5 or 8 dioptres, and act as if we were dealing with a strong myopia, rectifying the result by the following table:—

With a glass = + 5 D,

A distance of	12	centimètres	indicates a	Myopia	3 D
,,	14	,,	,,	,,	2
,,	16	,,	,,	,,	1
,,	20	,,	,,	Emmetropia	
,,	25	,,	,,	Hypermetropia of	1 D
,,	33	,,	,,	,,	2
,,	50	,,	,,	,,	3

Similarly, with a glass = + 8 D,

A distance of	12	centimètres	=	Emmetropia	
,,	14	,,	=	Hyperm. of	1 D
,,	16	,,	=	,,	2
,,	20	,,	=	,,	3
,,	25	,,	=	,,	4
,,	33	,,	=	,,	5
,,	50	,,	=	,,	6

Schweigger uses a plane mirror, with a metric ribbon attached, which is unrolled when the distance increases, and coils itself up as the distance lessens; thus the distance is readily ascertained.

E. J. EDWARDES, M.D.

Reviews.

Description des Formes Extérieures du Corps Humain au Repos et dans les Principaux Mouvements. Par M. P. RICHER. Paris: MM. Plon et Nourrit. 1890.

THIS remarkable work comprises a volume of text, and one of illustrations *in folio*, and is, of its kind, one of the most excellent productions we have seen. Anatomy, at any rate, so far as external forms are concerned, is by no means the monopoly of the medical student or the surgeon. The artist, who in his search after the beautiful, seeks to reproduce the human form, must perforce acquaint himself with the subcutaneous structures, if only to avoid technical errors and to learn to distinguish the normal from the abnormal. It is true that the Greek sculptors, and our forefathers in art down to comparatively recent times, knew nothing of anatomy properly so called. They trained themselves to recognize what was true to nature, and declined to trouble their heads about the why and the wherefore of what they saw and depicted. It mattered little apparently that the Greeks regarded the muscles as structures whose function it was to keep the bones warm, so long as they carefully noted their presence and the changes in shape which they underwent. The author, however, as a medical man of exceptional attainments, a disciple of Charcot and the writer of two well-known works on the *rôle* of Demoniacs and of the Deformed in Art, premises that the utility of anatomical studies in the education of artists who aspire to depict the human body in its various aspects, is now no longer a matter for discussion; and, in spite of the plausible reasons already alluded to, no one can doubt that the artist who has to draw a muscle, stands as much in need of precise information as the surgeon who has to manipulate it. M. Richer's anatomy is not that with which dissecting-room subjects have familiarized us. It is rather the study of living anatomy—of the play of muscles, of attitude and bearing, of the harmonious whole which is presented by the perfect, healthy, well-developed organism. An artist is perhaps a better judge of what is right and proper in the matter of outline anatomy than the surgeon whose interest therein is prompted by no abstract ideal of harmony and grace, but is a purely practical element. Certain masters have refused in practice to be bound by the arbitrary rules of anatomical facts, and drew what they thought best irrespective of what they saw, just as a landscape artist does not scruple to put in a tree or two, to fill up a gap. Such accomplishments, however, are not art as we understand art, even though they be sanctified by the prestige of a great name. They stand on a par with the wings of seraphins and Cupids, and the tails of mermaids—an artistic conception and nothing more. M. Richer insists on the fact that the flayed body is apt to prove misleading if too narrowly followed. The living man is not "a flayed body covered with skin." The skin itself, varying as it does in thickness, in elasticity, and in tension, alters the groundwork *in toto*; consequently the study of the denuded muscles is of use only when surface anatomy has been thoroughly mastered. Artistic anatomy starts from the surface—just the opposite to medical anatomy, which starts from the osseous scaffolding—and works outwards. The artist cares little about the disposition of the interior of a building—his attention is confined to the *façade*. Consequently special methods of demonstrations are required, and these methods constitute the *raison d'être* of M. Richer's book. The atlas comprises 110 full-page illustrations of rare excellence, in addition to 300 figures drawn by the author, whose accomplishments in this direction render it difficult to decide whether most to admire—the doctor or the artist. The work needs only to be brought to the notice of art-students to become deservedly popular. We should have liked to reproduce some of the more salient designs, if only to give an adequate idea of the scope of the work and the artistic merit of the selection, but for these we must refer our readers to the work itself.

ARTICLE 965.

Practical Electricity in Medicine and Surgery. By G. A. LIEBIG, Ph.D., Assistant in Electricity, John Hopkins University, Lecturer on Medical Electricity, College of Physicians, Baltimore, Member of the American Institute of Electrical Engineers, etc.; and GEORGE H. ROHÉ, M.D., Professor of Obstetrics and Hygiene, College of Physicians and Surgeons, Baltimore, etc. Pp. viii., 383. Philadelphia and London: F. A. Davis. 1890.

THIS work contains a large amount of information. The first part of the book is of a technical character, and some parts of it are written rather from the electrical engineer's point of view than the medical practitioner's. Dr. Liebig deserves praise for the clearness with which he explains certain terms frequently used but seldom understood, *e.g.*, potential, electro-motive force, current, quantity, etc. Ohm's law is admirably given, but surely Kirchoff's laws are unnecessary to the medical practitioner. The author passes with method from one subject to another, and it is not till page 117 that we arrive at an explanation of the various "units" employed by writers and their relation to each other, and to the unit of force according to Newton's law. While on this point we may mention that a misprint occurs on page 119' where 10^{-8} should be 10^{8}. To show the technical character of this part of the work, Chapter IV. gives us storage-electricity, and after very properly showing that in so-called accumulators there is no accumulation of electricity, we are treated to a discussion on the chemical changes that take place in "charging" the plates. Again, medical men seldom use dynamo-machines, and certainly do not require as such to understand them.

In the second part of the work, presumably by Prof. Rohé, we have first a chapter on electro-physiology, including Ziemssen's motor-points with diagrams comprising the whole body; then a chapter on electro-diagnosis; then an elaborate account of various electrical apparatus. In speaking of the reaction of degeneration, the author emphasizes the view that the sluggish character of the contraction is the essential feature.

Part III. is entitled, "The Applications of Electricity in the Treatment of Disease." This is the least satisfactory part of the work, because, as usual in all works in electro-therapeutics, all sorts of diseases are brought in as being benefited by electricity in the most optimistic manner. Thus we read regarding cerebral hæmorrhage, "the electrical treatment of cerebral apoplexy should be begun early. If possible, the application of the galvanic current by longitudinal, transverse, or diagonal brain galvanization, in order to secure the electrolytic action, should be begun not later than the second week after the occurrence of the lesion. . . . The rule laid down by Erb, to pass the current in the most direct line through the seat of the lesion, should be observed." All this seems "within a measurable distance" of absurdity to anyone who reflects upon our ignorance of the effect of galvanism on the cerebral tissues. The diseases of every different part of the body are gone over in detail. But the author confesses that the use of galvanism in diseases of the nervous system is still empirical. A good acquaintance with the literature of the subject is shown, and the authors have presented the medical public with a useful and attractive work, profusely illustrated, and written in a readable manner.

ARTICLE 966.

Recherches Cliniques et Thérapeutiques sur l'épilepsie, l'hystérie et l'idiotie: Compte rendu du service des enfants idiots, épileptiques et arriérés de Bicêtre pendant l'année 1889. By Dr. BOURNEVILLE, Physician to the Bicêtre Asylum, aided by SOLLIER & PILLIET. Paris: Aux Bureaux du Progrès Médical. 1890.

THIS is the tenth annual report of the Bicêtre asylum for children. These are divided into three groups:—(1) Invalid idiots; (2) "Valid" idiots; (3) Imbecile and backward children not invalids, whether epileptic or hysterical or not. The treatment consists in great part of an elaborate scheme of education suited to the capacities of the patients. Some are merely taught to open and shut their hands, etc., others go on to wash themselves, and clean and mend their clothes, some proceed to fencing, music, etc. The more useful occupations are infinite. During the year they realized 25,900 francs, of which seven masters received 15,574 francs, leaving a surplus of over 10,000 francs (£400). On January 1, 1889, there were 378 children; 22 died during the year.

Turning to the scientific side of the report, we find that bromide of gold did good in three cases of epilepsy, very little good in five cases, and was useless in two. Bromide of camphor was found extremely useful in epileptic vertigo. Picrotoxine was found practically useless in epilepsy. Dr. Bourneville has a long paper on myxœdematous idiocy, with cases and photographs. This condition more nearly approaches cretinism, in being due to arrest of development of the entire organism, than idiocy, which is due to arrested development of the brain more exclusively. M. Pilliet (Interne des Hôpitaux) contributes an article entitled, "Contribution à l'étude des lésions histologiques de la substance grise dans les encephalites chroniques de l'enfance" (on the minute anatomy of lesions of the grey substance in chronic encephalitis in children). The paper concludes thus: "We see that the lesions in the preceding cases affect the vessels, which are dilated, multiplied, and with their sheaths thickened or infiltrated with leucocytes or granulations. They affect also the neuroglia, which is thickened with abundant nuclei, opaque, then fibrillar, and finally vacuolated; these lesions appear first as points, then patches, which may become confluent. We have shown the formation of true bands of sclerosis; . . . finally, the pyramidal cells show all degrees of atrophy. We have not dwelt upon their vacuolation, which depends so much upon the reagents used. The white substance is atrophied, the nuclei of the small cells are multiplied, and granular bodies are abundant. These diffuse lesions escape all attempts to systematize them. Owing to the use of alcohol, it was not possible to follow the lesions of the conducting fibres . . ." A list of authors on this subject follows. Next comes an article by Bourneville and Sollier, on a hysterical family (boys and girls, all young), and finally one by Bourneville, "A new case of myxœdematous idiocy (pachydermic cachexia)," which concludes a most interesting volume. A coloured lithographic plate illustrates Pilliet's paper.

ARTICLE 967.

Revue des Sciences Médicales, en France et à l'étranger. Recueil trimestriel, dirigé par G. HAYEM, Professeur, etc. (No. 72, October, 1890.) Paris: G. Masson. Pp. 800.

THIS work consists mainly of analyses of various papers in the different branches of medicine and surgery recently published. Some of the papers belong to 1889. The last part of the volume has the title "Renseignements bibliographiques," and is arranged to form an alphabetical index of subjects, with the titles of the chief papers in each subject. The papers are chiefly French and English, but it is agreeable to find a fair sprinkling of German and Italian, and the abstract of each paper is well made. A short *critique* or *résumé* of the progress and tendency of modern medicine under each department would materially increase the usefulness of this work.

E. J. EDWARDES, M.D.

ARTICLE 968.

Cœliotomy. By R. P. HARRIS, M.D. Philadelphia 1890.

DR. Harris' etymological sensibilities have been pained by the general sanction given to the use of the term *laparotomy* as the technical equivalent for abdominal section; and he has, consequently, undertaken to demonstrate the necessity for substituting in its place a word which shall more accurately reflect, by its derivative value, the original meaning attached to the undecided name "gastrotomy." He proposes, in this connection, to use the new term "cœliotomy," from *koilia*, the proper Greek synonym for "abdomen," and *tome*, incision; and he supports his plea for pure terminology by pointing to the adoption, already general, of "cœliocele," for abdominal hernia, and "cœlioparacentesis." There is not a little to be said in favour of the introduction of the proposed word, while the objections to it are scarcely at all of a serious nature.

ARTICLE 969.

Epilepsy: its Pathology and Treatment. By H. A. HARE, M.D. Philadelphia and London: F. A. Davis.

THE treatise on epilepsy which Dr. Hare, who is Clinical Professor of the Diseases of Children in the University of Pennsylvania, has given to the world, is described on the title page as "being an essay to which was awarded a prize of four thousand francs by the 'Académie Royale de Médecine de Belgique', December 31, 1889." As a prize-essay, therefore, the work may claim to be considered, and tested in this connection, it may very properly be regarded as a meritorious performance. It can hardly be described, however, as a work by which much additional light is thrown over the obscurity which surrounds the clinical nature of the disease on which it treats; nor has the author any proposals to make in the direction of treatment beyond the methods previously in use. He very carefully reviews the various therapeutic and operative measures which have been resorted to for the relief and cure of the affection; and of many he has little to say except in the way of condemnation; while the doubtful utility of others renders them, in his opinion, but little deserving of confidence. In this part of the book there is very much that is interesting, and the comments that are indulged in by the author, when discussing the value of the various drugs which have been employed from time to time in the treatment of epilepsy, often convey a considerable amount of instruction. He shows a very high appreciation of the advances made by English surgeons in the operative branch of cerebral surgery, and refers to the work of Mr. Victor Horsley, of which he was himself an eye-witness in this country. Concerning the symptomatology, diagnosis, and pathology of epilepsy, the work of Dr. Hare is very full, and, so far as our present knowledge goes, is complete. As a survey of the subject in its various aspects, it possesses a high degree of excellence, and it is very clear that much care and study have been given to its production. The description of the aura is admirably drawn, and the various forms of epilepsy are clearly and carefully explained in detail. Taken as a whole, the book is well done; and although, as already pointed out, it adds nothing that is actually new to science, it is, notwithstanding, a very serviceable guide to the pathology and treatment of epilepsy.

C. H. WADE.

ARTICLE 970.

Transactions of the Clinical Society. Twenty-third Volume of the Transactions of the Clinical Society of London. London: Longmans and Co. 1890.

THE twenty-third volume of the Clinical Society's *Transactions* contains forty-two communications read before the Society during the session of 1889-90, and an account of twenty living specimens exhibited within the same period. The first paper in the volume is one by Mr. Mayo Robson, of Leeds, on fourteen cases of cholecystotomy, in which the conclusion is arrived at that, in the absence of malignant disease, the procedure is attended with but little risk, which is amply compensated by the relief it affords. A case of possible ptomaine-poisoning is contributed by Dr. C. Scott Watson, the patient, a man aged fifty-four. having recovered. It is suggested that the poison was formed in the intestines of the sufferer during the putrefaction of ingested food, of which evidence was afforded by the passage of offensive green, frothy stools. Dr. Hale White and Mr. Arbuthnot Lane jointly describe an interesting case of old hemiplegia associated with intense headache, in which the acute symptoms were permanently relieved as a result of trephining the skull over the motor area of the brain. An example of the thoroughness of modern surgical procedures is afforded by the paper in which Mr. W. H. Battle describes a case of tubercular ulceration of the bladder, treated by scraping the diseased surface through a supra-pubic incision, and which terminated successfully after the failure of other methods. The failure of super-heated air inhalations in the treatment of phthisis is illustrated by the reports of four cases so treated, which are contained in a short communication from Mr. H. H. Taylor, who asserts that this method of procedure has no influence over the course of phthisis; and he shows by experimental evidence that, even when inhaled at a temperature of 300° F., air, when it reaches the deeper districts of the lungs, has so far been reduced in heat by the losses incurred during its passage through the mouth pharynx, and larger air-tubes, that it is capable of raising the mercury of a clinical thermometer but a single degree, if so much as this.

Among the illustrations contained in this volume are several most interesting photographs of patients, the subjects of acromegaly; they serve most admirably to assist in the understanding of the accompanying descriptive letterpress.

ARTICLE 971.

A Dictionary of Practical Medicine. By various writers. Edited by JAMES HINGSTON FOWLER, M.A., M.D., Senior Assistant Physician to the Middlesex Hospital, etc. London: J. & A. Churchill. 1890.

ENGLISH compilers of dictionaries of medicine somehow or other contrive to compress their information within limits which seem absurdly small when compared with the ponderous and numerous volumes affected by French and American authors. Not indeed that this should savour of a reproach, for if the smaller work contain the necessary information the advantage is all on one side. The object of such a work as this is obviously to supplement the knowledge of the general practitioner in respect of points that he may have forgotten, and to strengthen his hands in the matter of treatment. Indeed, in nine instances out of ten, the practitioner refers to books of this kind for details of treatment, such as the choice of a drug, its dose or method of administration, or the effects to be hoped from its use, together with precise and practical information with respect to diet, its adjustment to the requirements particular cases, and the methods of keeping up a patient's nutrition when the usual means and measures have failed.

Judged from this stand-point, this volume does not altogether justify its claim to be a dictionary of practical medicine. If we are advised to peptonise the food, we are not told how to do it; and when alimentation *per rectum* is suggested, no information is vouchsafed as to the amount or composition of the suppositories or enemata which the practitioner is expected to use. There is a tantalising vagueness in directions which ought, above all, to be specific and precise. If a dictionary of medicine is to have a *raison d'être*, it can only be on condition that it gives the information in a concise, but thorough way, in such wise that the practitioner may not have to refer elsewhere before being enabled to put the precepts into practice. Before leaving the subject, we would like to enter a protest against the generous way in which certain contributors recommend patent medicines in the treatment of this or that complaint. In one article (that on asthma) these almost monopolise the reader's attention. The volume is nicely printed, and is remarkably free from typographical blemishes. We note, however, on page 627, the use of "creosote" for "creasote."

ARTICLE 972.

Aide-Mémoire d'Anatomie d'Amphithéâtre. Par le Professeur PAUL LEFORT. Paris: Baillière et fils. 1890.

MM. BAILLIÈRE ET FILS may be credited with having been the first French publishing-house to produce a series of handy little "cram-books" of the kind which have long been familiar to the English student. It is indeed surprising that it should have remained undone until the present time. The volume before us, clearly printed, solidly bound, and of convenient size, is a synopsis of systematic anatomy, and contains in addition chapters on microscopical manipulations and surface landmarks. It is one of a series intended for the use of candidates preparing for the second examination for the doctorate, and we have nothing but praise for the way in which it is put together. It is less dry reading than most similar compilations. We note, however, a liberal sprinkling of typographical errors, due presumably to imperfect correction of proofs. Some of these are serious, as, for instance, on page 81, where sterno-*hyoid* is given instead of sterno-*thyroid;* and lower down on the same page, where the *internal* jugular vein is mentioned as superficial to the sterno-mastoid muscle, instead of the *external*. Students who wish to work up anatomy in French cannot do better than to start on this little book. The price is three francs.

ARTICLE 973.

Manual of Urine Testing. Edited by JOHN SCOTT, B.A. Belfast: W. Mullen & Sons. 1890.

THIS little booklet, of quasi-microscopical dimensions, contains a succinct account of the physical characters, and instructions for the qualitative as well as quantitative examination, of the urine, together with the clinical deductions to be drawn therefrom. The student and the practitioner will both find the compilation a very useful one, the information it contains being comprehensive and clearly put. The smallness of the type is rather a drawback, and some of the descriptions might be extended without materially increasing the size of the work. Woodcuts are given of the latest instruments for quantitative analysis. Its price is only one shilling, so that, to use the current phrase, it may be said to be within the reach of every one.

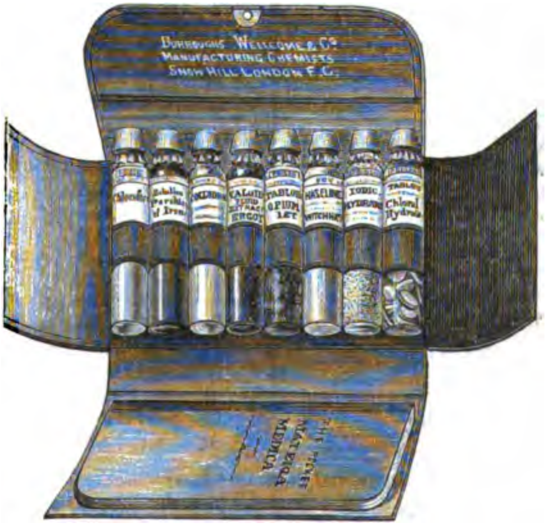
ARTICLE 974.

L'Homme et la Femme. Par le Docteur MARCELLUS CAMBOULIVES. Paris: Marpon & Flammarion.

THE author proposes to fill a lapsus in popular medical literature by describing man and woman from their formation to their latter end, pointing out the normal functions and the various ways in which they are perverted. In other words, the author treats in a popular, that is to say, in a non-technical, manner, the great physiological questions involved in education and production. He of necessity has to deal with some very delicate topics; and, armed with the *mens conscia recti*, he does not hesitate to fathom the abysses of sexual degradation and describe abnormalities with a view to prevention or cure. A good deal of the information will doubtless prove useful even to the laity, but much of it might have been left on one side without serious detriment to his readers. Under the circumstances, and allowing for the difference of opinion that prevails across the Channel as to the propriety of discussing certain questions *coram populo*, the author may be allowed to have accomplished his task with as much delicacy as it admits of.

New Articles.

THE POCKET MEDICAL OBSTETRIC CASE.



MESSRS. BURROUGHS, WELLCOME & CO. have submitted to us a specimen "Pocket Medical Obstetric Case" which they have designed. In a morocco case, measuring 6 × 4 × 1¼ inches, they have contrived to squeeze a suitable quantity of all the drugs that the obstetric practitioner is likely to need. There are tabloids of chloral hydrate; liquid extract of ergot, as well as tabloids of ergotonine for hypodermic use;

hazeline or strong perchloride of iron; opium and chloroform; iodic. hydrarg., a powerful germicide or disinfectant; and, last but not least, a bottle of flexible collodion, for repairing breaches of cutaneous continuity, in order to obviate the danger of septicæmic or specific infection. The case itself is beautifully finished, and the whole constitutes a perfect obstetric *vade mecum.* With it in his pocket, the medical man may feel assured that he is prepared for all ordinary emergencies within the scope of midwifery therapeutics, and as the price (£1 4s.) seems moderate enough, we should imagine that they will meet with a ready sale.

"COCA-BYNIN."

MESSRS. ALLEN & HANBURYS have forwarded us a sample bottle of "Coca-Bynin," a compound of liquid malt and coca, &c., intended to facilitate the extemporaneous preparation of coca-wine, or as a substitute for it. It is a thin syrupy fluid, with a well-marked flavour of the coca-leaf, and when mixed with sherry, or even with water, it yields a highly palatable drink in which the nourishing qualities of malt-extract are reinforced by the stimulant action of coca. The physiological effects of the latter drug are thus readily obtainable in a convenient and agreeable form for administration.

"PILL-TAKERS."

TRULY there is no limit to the ingenuity of inventors, and nothing seems too insignificant for the exercise of that innovating talent which distinguishes them from the common mortal. Messrs. JOSEPH YATES & Co., having been made aware of the difficulty which many people experience in swallowing pills, have devised and produced a "pill-taker," to obviate as far as possible the "hitch." It consists of a light horseshoe-shaped piece of metal, which grips the edges of the wine-glass and supports a little cup-shaped arrangement of bars in which the pill is placed. The victim has then but to take a drink, and the pill is washed down the gullet with an ease and a certainty calculated to surprise the novice in the act of pill-swallowing. No chemist can afford to be without one, and many private persons will doubtless be glad to avail themselves of the contrivance.

Patents.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37, *Chancery Lane, London, E.C.*]

16,226. Britton's Pills. SIDNEY BRITTEN, 2, Victoria Terrace, The Vale, Ramsgate. Oct. 13th.

16,425. An improved invalid lifting chair. PHILO BEVERLEY TINGLEY, 1, Queen Victoria Street, London. Oct. 15th.

16,683. A safety pneumatic ankle pad. HARRY MANFIELD, 47, Lincoln's Inn Fields, London. Oct. 20th.

16,780. Improvements in injectors. SAML. SHEPPERSON DIXON, Norfolk House, Norfolk Street, London. (Valere Mabille, Belgium). Oct. 21st.

17,025. Improvements in trusses for umbilical hernia. THOMAS SANDBACH DEAN, 54, Fleet Street, London. Oct. 24th.

17,328. An improved aseptic wound dressing material and the process for making the same. FERDINAND FLINSCH, Temple Chambers, London Oct. 29th.

17,351. A chloride of ammonium inhaler. JOHN NUGENT HARRIS, 3, Knox Street, Sligo. Oct. 30th.

17,649. Improvements in invalid couches. JOHN WILLIAM HOYLAND and EDWARD JAMES SMITH, Richmond.

17,733. An improved remedy for toothache and neuralgia. JAMES WILLIAM MURRAY, 53, Chancery Lane, London. Nov. 4th.

17,852. Improvements in magneto-generators for signalling or medical purposes. HENRY BINKS, 34, Leadenhall Street, London. Nov. 6th.

17,987. Improvements in electro-medical appliances. WILLIAM RANDOLPH VARNEY, 5, Magdala Buildings, Weston-Super-Mare. Nov. 8th.

The above specifications may be had of Messrs. Rayner & Cassell, Patent Agents, 37, Chancery Lane, London, W.C., at the prices quoted.

[Should any of our readers desire to take out patents for inventions, either English or Foreign, and require advice upon the subject, the "Patent" Editor will be pleased to give them the benefit of his knowledge and experience. Communications addressed to the "Patent" Editor, *Medical Recorder*, 13, Waterloo Place, Regent St., S.W., will receive prompt attention.]

Miscellany.

PROFESSOR VON NUSSBAUM, the distinguished surgeon of Munich, has died at the age of sixty-one.

IT is stated that the net receipts of the manufacturers of antipyrin during last year amounted to 5,437,032 marks, or nearly £280,000.

DR. WHITLA has been appointed to the Professorship of Materia Medica in Queen's College, Belfast, rendered vacant by the resignation of Dr. Reid.

TAXING THE PATENT MEDICINE VENDOR IN FRANCE.—M. Rouvier, the French Minister of Finance, has submitted his Bill or establishing a tax on pharmaceutical specialities, toilet articles, etc.

A FUND has been raised among the Governors of St. Bartholomew's Hospital to have the portrait painted of Sir Sidney Waterlow, whose services as treasurer to that institution have met with the most sincere appreciation.

DR. B. W. RICHARDSON, who has succeeded the late Sir Edwin Chadwick, as President of the Association of Public Sanitary Inspectors, delivered on November 1st, his inaugural address, taking as his subject, "Sanitary Reformers."

In the island of Maracaibo, which serves as a leper-colony, marriages are said to be permitted among lepers. During the last fourteen or fifteen years, there have been two births amongst the lepers, neither child showing any symptoms of leprosy.

In future the certificates of instruction in operative surgery, physiology, &c., delivered by Mr. Thomas Cooke, of the Private School of Anatomy, will be accepted by the Royal College of Physicians and Surgeons, the Nominatives of London and Cambridge, the War Office, &c., as evidence of training.

Between 1870 and 1873, there were 20,575 deaths from small-pox in Holland, but since the enforcement of compulsory vaccination the mortality has yearly steadily diminished, until, in 1890, only one death for small-pox was registered in Holland.

Professor Victor Horsley will deliver the Brown Lectures for 1890, in the theatre of the University of London, on November 14th, 21st and 28th, December 5th and 12th, the subject being "On the Arrangement of the Central Nervous System and the Pathological Conditions produced by Compression."

According to the French law the last born of twins is said to be the elder of the two. This curious decision was arrived at on the authority of the faculty, who held that the last to be born was the first to be conceived. As seniority no longer confers any privileges in respect of property in France, the matter is not of very great importance, otherwise one might be tempted to call the validity of the opinion in question.

A bran-new graduate, fresh from the parting embraces of his *alma mater*, was called to attend an old lady suffering from tape worm. Having relieved her of the parasite he set in an account for 10s. 6d., which the patient thought exorbitant and asked for particulars. These were given in the following terms:—"For delivering you of a tape worm 10½ feet long, at a shilling a foot, 10s. 6d."

The Mortmain Law.—There is in the present day no intelligible reason why the Mortmain law should any longer be allowed to exist, and we see with satisfaction that the Parliamentary Bills Committee of the British Medical Association, and Sir John Simon, are taking the matter in hand. It is to be hoped that when Parliament meets, effective steps will be taken to interest the Government in this subject, which so largely concerns the financial interests of our hospitals.

A Universal Russian Health Exhibition, organised by the Russian Society for the Promotion of Public Health, is to be held in St. Petersburg at the end of 1891. There will be five departments, viz., Biology, Statistics, Public and Private Hygiene, School Hygiene, and Balneology and Climatology. The Russian Government has promised a subsidy of 10,000 roubles. Other countries will be allowed to exhibit, but will not be permitted to share the prizes and awards.

Ether Drinking.—Mr. Ernest Hart recently read before the Society for the Study of Inebrity, a highly interesting paper on ether-drinking in Ireland, showing the extent to which the practice prevails in the County of Londonderry, and part of Tyrone. The Act, framed with the intention of affording facilities for the use of methylated spirit for industrial purposes, has given rise to its extensive use in some parts of the North of Ireland as a beverage. An enquiry is being made by Officials of the Board of Ireland Revenue into the matter.

A writer in the *Chemist and Druggist* says that possibly the most important application of the "loofah," or towel-gourd of Egypt, will be in the manufacture of surgical bandage-stuffs. Bandages made of this material are already offered for use. In Germany, soles for slippers are made from the loofah, and it is claimed that these soles are extremely elastic, and are washable; they are constantly dry, and will keep the feet cool in summer and warm in winter. The loofah also makes an admirable under-cloth for the saddle, as it rapidly absorbs moisture.

The London County Council have taken a judicious step in deciding to deal, at a cost of £300,000, with the unhealthy and condemned area in Bethnal Green, which lies between the western extremity of the Bethnal Green Road on the south, Columbia Market on the north, and Shoreditch High Street on the west. It would probably be difficult to point to another spot in the metropolis in such an insanitary state as this plague spot, while in its small, damp, and foul smelling, ill-ventilated, and ill-lighted rooms, are to be found the lowest dregs of society.

National Leprosy Fund.—The following are the names of the Members of the Leprosy Commission despatched to India by the Committee of the National Leprosy Fund, Dr. Beaven, N. Rake of Trinidad, nominated by the Royal College of Physicians; Mr. A. A. Kanthack, M.B. B.Sc., F.R.C.S., nominated by the Royal College of Surgeons; and Dr. G. A. Buckmaster, nominated by the Committee of the Fund. They will be assisted in their inquiries by Surgeon-Major A. Barclay (Secretary to the Surgeon-General to the Government of India), and Surgeon-Major S. J. Thompson (Deputy Sanitary Commissioner of the Second Circle in the North-West Provinces and Oudh), nominated by the Viceroy of India. After a stay of about one year in India, the Commissioners will return and make a full and detailed report, especially as to the isolation and treatment of lepers. As soon as funds permit, the National Leprosy Fund Committee will endow two studentships; one student to make Europe his field of inqury, and the other to study the disease in China.

Law for the Prevention of Blindness.—The legislature of New York has adopted a law, the substance of which is given below, for the prevention of that element of the causation of blindness which follows ophthalmia neonatorum. The statistics of our institutions for the blind show that not far from one-fifth of all the cases arise from that disease, and the sufferers belong largely to a class of our population that is attended by midwives and untrained nurses. The New York law, which went into effect on September 1st, is as follows:—Section I. Should any midwife or nurse having charge of an infant in this State notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse so having charge of such infant to report the fact in writing within six hours to the nearest health officer or some legally qualified practitioner of medicine, of the city, town, or district in which the parents of the infant reside. Section II. Any failure to comply with the provisions of this Act shall be punishable by a fine not to exceed one hundred dollars, or imprisonment not to exceed six months, or both.

Dr. Donald Macalister has been elected a member of the Senate of the University of Cambridge.

A Reuter's telegram announces that the recrudescence of influenza in Germany has now been placed beyond doubt. A school at Nagold, in Wurtemberg, has had to be closed in consequenc of the severity of the epidemic.

The inhabitants of St. John's, Newfoundland, appear to be suffering from severe epidemics of both measles and diphtheria, the mortality from each of which is stated to be very high.

The Prince of Wales has appointed Sir Oscar Munro Passey Clayton, C.B., Extra Surgeon in Ordinary, and Dr. Alan Reeve Manby, Surgeon Apothecary to His Royal Highness.

The Intelligent Foreigner on British Piety.—According to the *Zeitschrift des Oesterr. Apoth. Vereins*, a special prayer-book for medical men has just been published in England. It contains a selection of suitable prayers for delivery on the occasion of surgical and other operations.

The Drainage of Woking.—A definite scheme of sewerage and drainage has at last been prepared for the neighbourhood which has so rapidly grown up around Woking Station. The scheme is devised by Mr. C. N. Lailey, C.E., and it is forthwith to be submitted to the rural sanitary authority of Guildford, who are responsible for the sanitary administration of Woking, and who will probably apply to have the locality converted into a special drainage district.

Adulteration of Milk.—Perron has drawn attention to the adulteration of milk with oil, which is emulsified by means of borax or yolk of egg, and does not produce any effect on the taste of the milk. The addition of this emulsion gives "body" and conceals the addition of water. The mixture of pure tasteless oil of low specific gravity, emulsified with yolk of egg, effectually conceals the fact of milk having been skimmed.

The Bordeaux Naval School of Health was, on November 5th, officially inaugurated by Admiral Ribell, in the presence of the director-general of the naval health service, the Archbishop of Bordeaux, several generals, the city municipal council, faculty professors, and other notable persons. The school, it will probably be remembered, is intended for the training of navy physicians and pharmacists.

A Patient Poisoned by an Apothecary.—At Buda-Pesth a painful impression has been created by the death of one of the judges of the Royal Court. The deceased was suffering from acute pains in the stomach, for which the doctor ordered injections of ether. The remedy had scarcely been applied when symptoms of poisoning appeared, and the judge died. Almost immediately the apothecary's assistant appeared, saying that he had mistaken the bottle and sent the wrong drug.

Toxicology is a subject upon which a considerable portion of the boards of pharmacy question candidates in the United States. The *Western Druggist* regards this as highly important. It is a subject of sufficient value to the educated pharmacist to enable him to prevent errors in dispensing and sometimes save the life of a customer in cases of poisoning. In order to be of any practical value to the druggist his knowledge of poisions and antidotes must be in his head and not in books of references. It is true that the pharmacist cannot be expected to study the physiological effects of remedies to the extent that a physican does, but he should know the classes of poisons and the antidotes of most value for his use.

Mortality of Sewer Workers in Paris.—Improved personal and public hygiene has done much of recent years to diminish the mortality amongst the sewer men of Paris; but in spite of many precautions that are observed, the sick-list is still very high. According to the Report of the Medical Department of the Paris Public Works for 1889, which has just been issued, the total number on the sick-list during the year was 3,980, including re-admissions, representing 40,000 working-days, of absence, and a cost to the Treasury of £8,000.

Look beyond the Nose.—In a paper with the above title, read before the American Laryngological Association, Dr. Solis-Cohen inveighs against the increasing tendency of certain specialists, expecially such as have had little experience in general medicine, to magnify the importance of local lesions. While this tendency is perhaps most strikingly manifested by some others, yet nowhere, Dr. Solis-Cohen thinks, is it more pernicious than in the domain of rhinology. As an instance, he refers to the statements which have been advanced that malformation and enlargements of the nasal tissues are the sole and efficient cause of persistent and distressing headaches. He relates some cases which came under his own observation, where operations had been performed on the nose for the relief of headaches, the real cause of which had been overlooked. That some cases of headache, asthma, and other nervous disturbances may depend upon nasal lesions he does not deny; but, in "the majority of such cases," there are no nasal abnormalities. or, if any are present, they are merely coincident. The conclusion he draws is this:—Let us examine the nose as well as other organs of our patients, either as a matter of routine, or when special indication are present; let us treat *secundum artem* whatever nasal condition demands treatment; but let us not forget also to "look beyond the nose."

Dr. Richard Neale informs us that during the last two years he has been occupied in revising and rearranging, in one volume, the "Medical Digest," bringing it up to the end of 1890. The work has required on an average three or four hours' labour daily during the last forty-five years to bring it to its present stage. To those engaged in literary work the value of the "Digest" is unquestioned. The busy practitioner, however, for whom the book was originally designed, is not in many cases aware how invaluable it can be made in his daily and hourly practice. If consulted with ordinary care, it will afford information as to the cause of any symptom that may puzzle him, as well as reminding him of methods of treatment that may have escaped his memory, or may have never come under his notice, and this even if there be no journal at hand to which reference is made. It has been often remarked what an immense advantage the book is in everyday practice to those who make a point of referring to it as a matter of routine. The cost of printing so special a work is very large—too large, indeed, for him to feel justified in incurring the expense without an assurance that it will be acceptable to the profession. It is proposed to issue the book, containing from 1,200 to 1,300 pages, at 10s. 6d., post free in the United Kingdom, about June, 1891, to those gentlemen willing to take one or more copies, and who send their names *at once* on a postcard to the author's address.

The London
Medical Recorder.

Article 975.

THE MONTHLY MIRROR OF MEDICINE.

The interest of the medical world is undoubtedly centred, at the present moment, in Dr. Koch's remedy for tuberculosis.

As to the composition of this remedy, nothing is yet known, but we are rapidly accumulating evidence as to its effects on tubercular diseases of various kinds. Von Bergmann's, Levy's, Gerhardt's, and Fraentzel's cases have demonstrated the effects of the remedy as far as can be done in the short time which has elapsed since its introduction, in cases of lupus, tubercular disease of glands and joints, pulmonary phthisis, and to a less extent in tuberculosis of the larynx and meninges of the brain.

We learn from Dr. Koch's communication in the *Deutsche Mediz. Woch.*, of Nov. 14, that the subcutaneous injection of ·25 cubic centimètre of the liquid, in a full-grown healthy man, suffices to produce an intense effect. Three or four hours after the injection there comes on pain in the limbs, fatigue, inclination to cough, and difficulty of breathing, which speedily increase. In the fifth hour a violent rigor occurs. Vomiting and rise of temperature up to 103° are present at the same time. After twelve hours all the symptoms abate. The temperature falls until, next day, it is normal, and a feeling of fatigue and pain in the limbs continues for a few days. The reaction is less marked with a smaller dose, the lowest limit being reached at a dose of ·01 cubic centimètre. When this dose is used, the reaction, in most people on which experiments were made, showed itself only by slight pain in the limbs, and transient fatigue.

In extraordinary contrast with this action on the healthy subject, is the action on the tuberculous subject. While the former reacts scarcely at all to a dose of ·01 cubic centimètre, the same dose, injected subcutaneously into the latter, suffices to produce a severe general reaction as well as a *local* one. In delicate children, affected with tubercular disease, a powerful reaction is obtained with ·001 cubic centimètre, or even less. The general reaction begins four or five hours after the injection, and consists in an attack of fever, which, generally beginning with rigors, raises the temperature to 103°, or 104·5°, or even to 105·5°. At the same time, there are pains in the limbs, coughing, and often vomiting. Occasionally slight icterus, or a measly eruption on the neck and chest, is present. The attack lasts from twelve to fifteen hours, and, as soon as it is over, the patient feels comparatively well. The local reaction, which, of course, can be best observed when the tuberculous affection is visible, as in lupus, begins a few hours after the infection, the seat of which may be far from the diseased area. The lupus spots begin to swell and redden, and this they generally do before the initial rigor. During the fever, swelling and redness increases, and may reach such a high degree that the lupus tissue becomes brownish, and necrotic in places. After the subsidence of the fever, swelling of the lupus tissue decreases gradually, and disappears in two or three days. A slight serous oozing, which takes place over the lupus spots, dries into crusts which fall off after two or three weeks. A clean cicatrix may be all that remains, but usually several injections are required for the complete removal of the lupus tissue. The specific local reaction in tuberculosis of the glands, bones, and joints, etc., is less striking, but is evidenced by swelling, increased sensibility, and redness of the superficial parts. The local reaction of the internal organs, especially the lungs, is not at once apparent, unless the increased cough and expectoration in consumptive patients, which occur after the injection, be considered as pointing to a local reaction.

The fact that a specific general and local reaction takes place in tubercular subjects after so small a dose as ·01 cubic centimètre, or less, gives to the remedy a diagnostic value. By its aid doubtful cases of tuberculosis of the skin, joints, or lungs may be recognised with certainty. There is no question, Koch points out, of the remedy killing the bacilli. It only affects living tuberculosis tissues, and has no effect on necrotic cheesy masses, necrotic bones, etc. Moreover, according as the tuberculous tissue is destroyed, the dose may be rapidly increased, and when a point is reached at which the reaction is as feeble as that of a non-tuberculous patient, then it may be assumed that all tuberculous tissue is destroyed. After that, the treatment will only have to be continued, Koch thinks, by slowly increasing doses, in order that the patient may be protected from fresh infection, while bacilli are still present in the organism.

Drs. Levy and von Bergmann have treated several cases of lupus by Koch's method. Some of Dr. Levy's cases have been under treatment for a considerable time, and in one, at least, there is evidence of a complete cure having been effected, for, not only are the obvious local manifestations of the disease removed, but the patient no longer reacts to the injections. In another case, a complete cure seemed to have been effected, but further subcutaneous injections proved, by the reactions, that there was more tuberculous tissue present. Three of von Bergmann's patients, who have been under treatment for some time, have very much improved, but reaction still continued after the injections. As far as present experience goes, no definite opinion can be formed as to the length of time necessary for perfect recovery. Levy and von Bergmann also report cases of tuberculosis of the bones and joints treated by Koch's method. The characteristic reactions are well marked. Some amelioration has already been observed in the disease, but, as yet, one can only reason by analogy, and suppose that destruction of the diseased tissues takes place as in lupus.

Prof. Fraentzel has given an account of cases of phthisis treated in his clinic by Koch's method. He divided them into two classes: (1) those in the first stage of phthisis; (2) those in advanced stages of the disease. He records decided improvement in the first group. The cough decreased, the general condition visibly improved, the night-sweats disappeared, and the weight increased. The bacilli in the sputum decreased in number, and seemed stunted. As regards the advanced cases, no change of condition could be observed, and *post-mortem* examination, in some of the cases, showed no indication of the commencement of recovery. Dr. Levy's experience in cases of phthisis is similar to Fraentzel's. Three cases, indeed, of early phthisis, which he treated, were dismissed from the hospital as cured. It must be confessed, however, that it is impossible to pronounce any of the cases cured, the time which has elapsed since the commencement of the treatment, two months and a-half at the outside, being much too short to pronounce a safe opinion on the subject. Koch has only ventured so far as to say that his trials with the remedy have disposed him to conclude that phthisis, in the beginning, can with certainty be cured, but that no evidence can as yet be adduced to prove that the cure is lasting, since relapses may occur. An important point which has been urgently insisted upon, is the dangerous severity of the reaction which may occur in extensive pulmonary tuberculosis. More than one patient, we believe, has died within twenty-four hours of the first injection.

Gerhardt and von Bergmann have treated three cases of tuberculosis of the larynx, and one case, at least, of tubercular meningitis has been treated by Levy. The course of the cases tends to bring one fact—one indeed which might have been anticipated—that in certain positions the local reaction and swelling may lead to grave complications. Severe dyspnœa was observed after injection in a case of laryngeal phthisis, and a case of tuberculous meningitis, under Dr. Levy, died twenty-four hours after injection. Although this last case was said to have been moribund before the treatment was begun, still it cannot be denied that great danger may arise from pressure on delicate structures at the base of the brain, in connection with the local reaction.

Notwithstanding the possible far-reaching effects of Koch's treatment on all forms of tuberculosis, we must not neglect to study the advances which are being made in other methods of treating this disease. The remarkable results which in recent years have been obtained from laparotomy, in cases of tubercular peritonitis, is a matter of great interest to the physician, no less than to the surgeon. Tubercular peritonitis has, till lately, been regarded as a disease strictly within the domain of the physician. Although little reliance has been placed on any special line of treatment, the disease has been by no means looked upon as one necessarily running a fatal course. Every physician has met with cases in which the diagnosis of tubercular peritonitis was practically unquestionable, and which completely recovered under ordinary general treatment alone, or it may, combined with local applications to the abdomen. The proportion of cases which recovered has been, however, always a matter of doubt, and opinions have varied much on this point. Some, indeed, were always inclined to question the diagnosis from the mere fact of recovery having taken place. During the last few years several publications have called attention to the possibility of curing tubercular peritonitis by surgical intervention. The most important of these is Kœning's paper which was communicated to the Berlin Congress. This paper contains a full account of the cases published up to that date, a hundred and thirty in all, and he shows the remarkable proportion of eighty-two per cent. of recoveries.

In the *Lancet*, of Nov. 15, Mr. Keetley reports particulars of those cases of tubercular peritonitis in which abdominal section was performed. The cases are interesting from many points of view. One was that of a girl, aged eighteen. She had been operated on by Dr. Venn for a supposed ovarian tumour. An incision into the abdomen, however, revealed the existence of tubercular peritonitis. The opening was at once closed, and the patient completely recovered. A year afterwards, Mr. Keetley operated on the patient for a ventral hernia, which had developed in the cicatrix. On this occasion, where the abdomen was opened, not a trace of the tubercle which had formerly existed was to be seen. Hirschberg, Ahlfeld, and Hofmokl have each recorded a case where the abdomen had been opened during life, and tubercular peritonitis had been revealed, and where the patient died from six months to two years afterwards, and the autopsy showed the peritoneum free from tubercles. Mr. Keetley's case, which may be described as an autopsy *in vivo*, adds another proof of the possibility of recovery from tubercular peritonitis, not only from a clinical, but also from an anatomico-pathological aspect.

The other two cases, related by Mr. Keetley, were those of children in whom symptoms of intestinal obstruction were present, and necessitated abdominal section. On opening the abdomen, tubercular disease of the peritoneum was discovered in each case, but no definite strangulation. A strip of iodoform gauze moistened with sublimate lotion was passed down into the pelvis, leaving one end projecting from the abdominal wound, which was closed except at this point. One of these children, after improving somewhat for a few days, died on the fifteenth day. The other made a rapid recovery, and two months after the operation was in perfect health, and the abdomen was of normal appearance. The rapid restoration of health, which followed the operation in the last-mentioned case, certainly suggests a relationship of cause and effect, between the operation and the cure. The relationship cannot, indeed, be considered as conclusively proved in this or other published cases. Of course, as above pointed out, the proportion of recoveries after laparotomy is larger, but we want a standard of comparison by which operated and non-operated cases can be accurately compared. It is not difficult, however, to believe that any mechanical interference with the peritoneum in tubercular disease might lead to a retrogression of the process. The tubercle bacillus does not always find in the human organism a favourable soil for its development. The tubercular neoplasm in the peritoneum is very superficial, separated from the peritoneal cavity merely by an endotheleal layer, and is therefore favourably situated for being acted on by local means. Moreover, the simple evacuation of ascitic fluid, when present, may well have a beneficial effect, this fluid very probably forming a medium for the growth of the tubercle bacillus. Indeed, the success which has attended all forms of operative treatment, whether simple incision or incision followed by irrigation, or by the application of antiseptics of various kinds, suggests the probability that the evacuation of fluid is the common element of benefits in many cases.

M. Debove, in the *Gazette des Hôpitaux*, has recently advocated the evacuation of the fluid by aspiration, followed by washing out the abdomen through the aspiration puncture with a solution of boric acid or with sterilised water. He publishes one successful case.

ARTICLE 976.

THE MONTHLY MIRROR OF SURGERY.

THE journals, both medical and lay, teemed last month with references to and records of Koch and his work. The great medical question of the hour is, how far has Koch been able to establish his position? Practically speaking, the distinguished German professor has had little to do with the position in which he finds himself. Long before he was ready to make known to the medical world the results of his researches against tuberculosis, he was literally "bounced upon," and became from that moment, the unguarded moment at the Berlin International Medical Congress, when he read a paper on the subject, a perfect gold-mine to newspaper correspondents eager for something sensational. The effect of all this fore-disclosure of facts has certainly been to cause an immense sensation in the whole civilized world, and, as might have been expected, there has necessarily followed an impetuous rush of tubercular persons to Berlin, the larger number of whom have only experienced bitter disappointment. It has been said, and we believe with truth, that it was Virchow who pursuaded Koch to read his paper on his anti-tubercular investigations at the Berlin Congress. Koch himself was strongly averse to undertaking anything of the kind. He felt, as he has freely expressed since, that any disclosure of his special work in this direction would be premature, and it was his special desire to be quite certain of his ground before committing his results to publication. The influence, however, of Virchow prevailed. It was doubtless with the wish to have something distinctly worthy of German scientific work that the latter prevailed upon Koch to read his paper. However this may be, we know the result: the paper was read; from that time forth Koch was dogged by inquirers and correspondents; every laboratory movement of his was "shadowed," and before he knew where he was, the world was informed that he had discoverd a "cure for consumption"; then further concealment became impossible. Everything else had to be done in the light of day—and the newspaper correspondents. Koch, however, clung to the secrecy of the nature of the preparation of his remedy. Two only are in the possession of this secret. Bacteriologists have generally a shrewd notion of what his lymph consists, but the honour which is in them, prevents them from revealing their knowledge, or of trying to produce the fluid. With regard, however, to this question of secrecy, we think Koch is acting most inexpediently. By maintaining his remedy as a secret preparation, he is doing science an injury. No good can come of his action. Science, we hope, at all events, is above identifying itself with a purely commercial transaction; in other words, to convert so great a scientific discovery, affecting the welfare of the human race, into a huge enterprise for the purpose of collecting the shekels, seems to us only another way of sullying the fair fame of science. Not that we attribute blame to Koch. If the news which reaches us is correct, that the German Government intend to keep the preparation of the lymph a secret, and manufacture it themselves, and supply the whole world at so much a bottle, we can only say that we fervently trust we have been misinformed. At the present state of the anti-tubercular discoveries of Koch, the point which has probably struck surgeons a good deal is—in what respect will surgery be affected by Koch's treatment? The evidence so far is incontestable, for example, that the inoculations have an immense effect upon tubercular lupus. The proofs of this have now been shown in England, and they are rapidly accumulating, wherever the lymph has been tried. Here is the individual testimony of one who personally tested the results in Berlin. "I will only add my testimony to the marvellous results obtained in the now almost classical cases of Anna T. and Fr. K., which were among the very first cases injected by Koch himself. Both were cases of extensive dermo-lupus of the left upper extremity, the former associated with extensive ulcerations, which are now completely and soundly healed. (*Lancet*, Nov. 29, 1890, p. 1150.) The same observer refers to notes, which he took at the bedside, on cases of tubercular disease of joints and bones, and of glands. In a case of early disease of the hip-joints, he states that cure seemed to be definitely completed by the injections. In this case six injections were used, and most marked improvement followed. On admission, the left thigh was slightly abducted, flexed, and quite fixed. As the result of the treatment, the patient was able to sit up in bed. There was perfectly free mobility, without pain of the left hip-joint. Rotation was absolutely unimpeded, there was complete flexion, and a scarcely perceptible lordosis was obtainable on full extension. Again, some interesting notes are subjoined on a case of typical example of synovial disease of the right knee, with slight pulmonary affection. The patient, aged twenty-three, was admitted on Nov. 1, with extreme pulpy swelling of the synovial membrane of the right knee, tubercular disease of one foot, and enlargement of the glands. He had been under ordinary surgical treatment for one year, without improvement. The first injection of 0·01 centimètre was made on November 4, and repeated on the 10th, 12th, and 14th, the reactions varying from 39·80° to 40° C. Each injection was followed by a marked swelling and heat of the joint. On Nov. 20, the patient was lying in bed without any splint or controlling apparatus. The knee was still considerably swollen, but there was no heat or tenderness. A cold abscess existed in the upper part of the synovial membrane. On November 22, the patient was up and moving about freely on crutches, with a straight limb. The swelling had very considerably subsided in the interval, and presented the general appearance of a chronically diseased joint, which had been under treatment for some weeks by the ordinary methods of rest and pressure. Although the treatment had only lasted for sixteen days, and no splint had been used, the improvement was little short of marvellous. He further describes the results of treatment upon tubercular glands. The patient, aged twenty-five, had suffered from gland-disease since the age of fourteen. Two operations had been performed, the scars of which were still visible. No pulmonary tuberculosis. The glands are situated behind the angle of the jaw, and in the submaxillary region on the right side. An assistant and the patient himself affirmed that, before the commencement of the treatment, a gland behind the angle of the jaw, and another in the submaxillary triangle, were respectively the size of hens' eggs. The skin was red and adherent, and the swelling was painful. The first injection was given on Oct. 11, and the second on the 13th instant. After the first injection the temperature rose to 41° C., and there was considerable local swelling, the outlines of the glands being indistinct. On the 19th the largest glands were the size of cob-nuts, moveable, and the skin was of normal colour and freely mobile. She was again injected for a fourth time on the 29th, and the temperature rose to 40·9 C., but the next morning there was no perceptible local reaction. Another similar case showed a very decided improvement after injections of 0·01 centimètre on alternate days, extending from November 6th to the 14th. The disease had existed for two years. In both these cases the author states that the disease was probably too advanced for a complete cure to take place, but the affection had apparently been entirely arrested, and the swelling much reduced. The record of these cases was contributed to the *Lancet* by Mr. Eve. From the foregoing account it would seem almost incontestable that surgical diseases are very largely affected by injections with Koch's lymph. This fact being admitted, there is evidently room for speculation upon the probable effects which will result to surgical practice. The lymph acts not by causing the death of the bacillus of tubercle—this Koch distinctly asseverates— but by causing the death of the tissue in which the bacillus is located. The necrotic processes are, presumably, of course, followed by the demise of the bacillus, the latter result being a consequence of the former. Narrowed down to these limits, the question then becomes one more easy to grasp; and the effect of Koch's treatment upon present surgical practice will altogether depend upon the extent to which the necrotic products caused by the injections will or will not be absorbable. If, for example, a chronic tubercular synovitis of the knee-joint can, under the influence of rest and counter-irritation, undergo satisfactory resolution, analogically speaking, we cannot see why the same result should not ensue in the case of Koch's injections. There is no doubt that much of the "necrotic tissues" will be absorbed after Koch's treatment in various cases of disease, and probably what the surgeon will find will be that he will be called upon to perform a much less severe operation, as an adjunct to the treatment, than would have been the case had the treatment not been used. The question of the treatment, again, of tubercular peritonitis opens up a most interesting feature in connection with Koch's injections. A case, for instance, may strongly be suspected to be one of tubercular peritonitis, but the uncertainty of diagnosis could be plainly disposed of by using Koch's lymph, assuming, for the nonce, that all that he says of it is true. Reaction would follow the use of the remedy if tubercular peritonitis was present, and the usual injections would be continued in such a case until there was no change produced. Clearly, then, laparotomy will have to "drop out of line" as a surgical procedure for tubercular peritonitis, under these circumstances. The surgeon never does anything to the peritoneum, even when he performs laparotomy for the disease; but, in an altogether undemonstrable manner, the remarkable thing is that, often after such a laparotomy, the tubercular affection "clears up," and the patient makes an excellent recovery. What happens is not known; it would, therefore, be especially interesting to note the effects of Koch's treatment upon cases reputably of tubercular peritonitis. We have only to say, in conclusion, that we sincerely trust before these lines appear in print Koch will have published to the world the secret which he so persistently holds, and, by so doing, put an end to the reproaches which he is bringing upon science.

A practical paper on operations on the enlarged prostate, is contributed to the November number of the *American Journal of the Medical Sciences*, by Belfield. He discusses the various forms of surgical treatment of this vesical trouble, and describes the modes of operation under four heads, namely, by the urethra, by perineal incisions, by suprapubic cystotomy, by combined perineal and suprapubic incisions. He points out that it is indisputable that in many prostates of advanced age, a degeneration of the vesical wall co-exists, the contractility of the bladder is seriously impaired, and removal of the prostatic obstruction fails to restore voluntary evacuation of the organ. The proof of this condition is furnished, as Guyon points out, by occasional cases of chronic retention and cystitis in elderly men, without prostrate obstruction or other mechanical obstacle; the failure to evacuate the bladder being due simply to impairment of the vesical contractility. In nearly one-third of the cases on record, the radical operation failed to restore voluntary urination; while in several it is evident that the removal of the obstacle was incomplete, yet, in others, the explanation of failure seems to have been impaired vesical contractility. Differentiation between the obstructive and degenerative factors, in a given case, should naturally precede operative measures. At present, such differential diagnosis cannot always be accurate; the subject of pronounced sclerosis exhibits rigid arteries, polyuria, and often hæmaturia; his prostate is extremely hard; the flow of urine through the catheter is feeble; complete evacuation of the bladder is accomplished only by pressure upon the hypogastrium. In the presence of these symptoms, restoration of voluntary micturition cannot be expected; the radical operation is useless except to facilitate difficult catheterism; unless, indeed, Kümmell's success in gradually restoring vesical contractility, by means of strychnine and electricity, shall be found frequently capable of repetition. Passing over the author's observations in regard to the first two modes of operation, we come to the consideration of the suprapubic cystotomy method. Of this the author states that at first it seemed to fulfil every requirement in cases where surgical interference was called for in patients with enlarged prostates; it secures, he says, minute exploration of the entire vesical surface of the prostrate, the easy recognition and complete removal of the intra-vesical projections, and thorough drainage of the bladder. Prostatectomy by this incision has been performed over eighty times with satisfaction to the operator, and often with results most gratifying to the patient. Yet, in instances, this operation has failed to detect or to remove the prostatic obstruction; failures which direct attention to the fact—rather obscured by the many brilliant successes in removing intra-vesical growths—that the object is to restore a low-level channel through the prostate, and not simply an excision of salient tumours; and, to this end, exploration of the urethral is quite as important as that of the vesical surface of the prostate. For the canal may be distorted by growths, imperceptible or inaccessible from the bladder; especially frequent is a pronounced thickening of the sub-urethral prostate, whereby the urethra is elongated, and the vesical orifice displaced upward. From cases recorded by McGill, Guyon, Schmidt, and the author, the occasional insufficiency of the suprapubic operation to restore a proper channel through the prostate was demonstrated. It seems, therefore, that by suprapubic incision alone, the surgeon may find himself unable to restore the patency of the urethral channel; that the intra-vesical projections may, in a given case, constitute but a part of the prostatic obstruction; that the discovery and removal of such outgrowths are not necessarily a complete operation. The prostatic urethra should be stretched and explored by the finger, and the discovery of a hard mass, or an unduly rigid ring, should be the signal for perineal urethrotomy, incision, or excision of the resisting tissue, and thorough stretching. Kümmell supplemented the suprapubic excision of tumours by sinking the cautery into the prostatic substance—an imperfect substitute for the perineal operation. It seems probable that the combined operation by both suprapubic and perineal incisions will become the rule rather than the exception; the addition of the *bout du nière* increases, but slightly, the injury to tissue, and the time of anæsthesia, while it affords an access to the entire prostate, which may convert an utter failure into a complete success. The author lays stress upon the necessity of the surgical procedures recommended being undertaken in an earlier period of the disease than usually obtains.

M. Fort, of Paris, has just recorded another case illustrating his new form of treatment for stricture of the œsophagus. On the 17th of October, he read a paper at the *Société de Medicine Pratique*, on a case of stricture of the œsophagus treated by linear electrolysis, in which recovery ensued. The patient was a young girl, aged nineteen, who had swallowed, by mistake, some corrosive liquid used by painters for the purpose of cleaning their pictures. In consequence of this, cicatricial contraction of the œsophagus followed, and the contraction occurred in two places, one in the upper part of the tube, and the other about a dozen centimètres below. The injury was received in April, 1889, and in January of the current year the patient was attacked with influenza, and shortly after this, the lower stricture became impermeable. Up to this time, she had been able to take liquid and even solid food; but as soon as the obstruction became complete, this became impossible, and it was necessary to resort to nutrient enemata. This method, however, was apparently insufficient to prevent a fatal result from inanition. The patient then came under the care of the author, who saw her in consultation with Dujardin-Beaumetz. She then weighed only 85lbs., having lost 45lbs. since the accident. These notes were taken on the 25th of June last. The author carefully examined the strictures with a view to ascertaining their extent, and the density of their walls, and having done so, he proceeded to apply electrolysis. In all, seventeen applications were made. At the end of seven weeks, he introduced an œsophageal bougie, and on the following day, the patient was able to take all descriptions of nourishment, and since then has enjoyed perfect health. She has gained 35lbs. since the commencement of the treatment. In formulating his conclusions, M. Fort says, combined with dilatation, linear electrolysis yields excellent results in the treatment of strictures of the œsophagus. It certainly relieves organic strictures, and it cures, without doubt, cicatricial contractions, especially those which allow a small bougie to be introduced as a guide to the electrolysis. The author, since communicating the results of nineteen cases at the last Congress of French Surgeons, reported a further series of cases at the International Congress, making forty-nine cases in all. Of the first series, eight cases were of the fibrous variety, and after a period varying from nine to thirty days, seven were so far cured that 18 to 20-millimètre bougies could be passed. The remaining eleven, though malignant, were much benefited. This form of treatment has been deemed by some to be dangerous, on account of the proximity of the pneumogastric nerve. Apropos of the subject of stricture of the œsophagus, a useful and comprehensive paper is published by Ingals in the *Medical Record*, for July 5, 1890. In the *Aust. Med. Journal* for August 15 are three cases of cholecystotomy, the notes of which were read at a meeting of the Medical Society of Victoria.

ADVICES have been received from Suakim confirming the report of the prevalence of cholera at Massowah.

ARTICLE 977.

SYRINGOMYELIA.*

IN a recent number of *Brain*, M. Paul Blocq has given a very clear and concise account of the disease known as syringomyelia. Syringomyelia may be defined as a chronic affection of the spinal cord, characterised, anatomically, by the pathological formation of cavities in this organ, and clinically, by certain alterations in sensibility, associated with trophic disorders. The disease has only recently been differentiated in its clinical aspects, having been confounded hitherto with progressive muscular atrophy.

The word "syringomyelia" was first used by Ollivier (d'Angers) in 1827. This author did not admit the existence of a central canal in the spinal cord, and he held that the various facts brought forward in support of its existence were to be attributed to an arrest of development. Ollivier invented the term syringomyelia to indicate this hollowing out of the cord, but had no idea of the disease which we describe by this term. When, however, anatomical researches showed incontestably the existence of a central canal in the cord, syringomyelia was soon forgotten. It was not long, however, before observations of abnormal dilatation of the central canal were made, and the majority of them were, at the time, looked upon as arrests of development, and the name hydromyelia was given to them. In 1870, M. Hallopeau maintained that certain cases did not belong to the class of congenital anomalies, but should be described under the term "Diffuse Peri-ependymal Sclerosis." Charcot and Joffroy, about the same time, described a similar case, but attributed the formation of the cavities to a granular disintegration. Then came a series of anatomical works by Grimm (1869), Simon (1874), Westphal (1874), and Leyden (1876), tending to show that the old syringomyelia, afterwards designated hydromyelia, then peri-ependymal sclerosis, is in reality a neoplastic lesion, of a gliomatous nature, leading to the formation of cavities in the grey matter of the cord. The affection did not really take a definite place in the description of diseases until the works of Schültze of Dorpatt (1882), and Kahler of Prague (1888), established that a certain number of particular symptoms might be traced to that organic lesion, and even that the symptoms might determine the principal peculiarities as to seat and extent of this lesion. The whole subject has been reviewed in several publications during the last two years. Of these the thesis of Dr. Brühl† is the most important, and it contains the most complete bibliography extant on the subject.

The pathological anatomy of syringomyelia comprises a special principal lesion in the spinal cord, and secondary lesions in the peripheral nerves, in the muscles, bones, skin, etc. After opening the *dura mater*, the cord usually presents an abnormal appearance. In a well-marked case, it presents the appearance of a large blood-vessel, empty and collapsed. In ordinary cases, it is only irregularly increased in size and deformed in places. On palpation, the cord is often soft and fluctuating. On the other hand, if the cavity is very small, it gives the sensation of a rigid stalk embedded in the cord. On transverse section, one or more characteristic cavities are visible to the naked eye. There may be only one such cavity, but at times there are two or three, entirely separate from the central canal. These lacunæ are always situated in the grey matter, either in the two posterior horns, or the two anterior horns, or in any one of the four horns. The size of the cavity varies in every degree, from a simple slit to a cavity occupying nearly the whole area of the cord, of which only sufficient remains to form a thin wall. The longitudinal extent varies. The cervical enlargement is most frequently affected, and thence it usually extends upward for several centimètres, and downwards throughout the entire dorsal region. It may, however, encroach upon the medulla and extend as low as the *filum terminale*. The contents of the cavity is usually liquid, like the cerebro-spinal fluid, but varies sometimes in colour and consistence, occasionally being almost gelatinous. The adjacent parts of the cord are necessarily affected, more or less compression or destruction of the grey matter, and of the columns of white matter, being seen. The central canal of the cord is usually unaffected, or it may be displaced in front of the cavity, and its form may be, more or less, altered.

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* *Brain*, October, 1890.

† "Contribution à l'Etude de la Syringomyélie." Thèse de Paris. Fevrier 1890.

According to the majority of authors, the microscopic changes consist in a neoplastic hyperplasia of the grey or gliomatous matter; according to other authorities, in an inflammatory hyperplasia or myelitis. The chief seat of the changes is in the grey matter, and in the gelatinous substance of Rolando. The neoplastic tissue consists chiefly of an agglomeration of large cells, with anastomosing trabecular processes. The network formed by the processes is rather dense, and encloses indistinct granular elements and free nuclei. Finally, there exists in the hyperplasic mass, a large number of pigment-granules, and small yellow, refractile bodies, which give to the tissue a yellowish-brown colour. The limiting layer of tissue lining the cavity forms a smooth membranous cuticle, composed of a dense layer of the trabecular tissue just described. The parts of the cord adjacent to this gliomatous hyperplasia are variously affected, being compressed or displaced, or separated out by an infiltration of the neuroglia. Secondary sclerosis of the white columns may be present.

The peripheral nerves have been shown to be affected in syringomyelia. The intra-muscular nerves of the muscles that are atrophied have been found much altered, being only represented by empty sheaths. The cutaneous nerves, in those parts of the skin, where phenomena of dissociated sensibility exist, have been found to have undergone neuritic changes.

Very little is known about the causes of syringomyelia. The age at which it begins to show itself varies between fifteen and thirty-five years. Men are more frequently attacked than women. Among the determining causes have been included debilitating affections, injury, overwork, chills, infectious diseases, and drink; but often none of these influences are discoverable in the history.

The symptoms of syringomyelia vary greatly, but a mean type may be described, which will give a general idea of the condition. In a case of this mean type, the disease will be found to commence insidiously, usually by increasing weakness in the upper limbs, together with numbness in these limbs. Soon muscular atrophy is added to the functional weakness. Sensory disorders become more marked. Spinal curvature in the form of scoliosis becomes a symptom, and finally various motor troubles are added. Examination of the patient at this stage shows the following points:—The attitude is peculiar, due to the curvature of the spinal column. There is a claw-like deformity of the hands, similar to that seen in progressive muscular atrophy. The hands are wasted and present trophic changes, such as ulcers and painless whitlows. There is noticeable loss of muscular power, and the tendon-reflexes are absent or diminished. Sensibility to touch is retained, but sensibility to pricking, as well as to heat and cold, are abolished, not only over the upper extremities, but over more or less extensive areas elsewhere.

The most important clinical factor in the diagnosis is the pathological dissociation of the different kinds of sensibility. The law is, although it is by no means absolute, that three forms of sensibility are affected in the disease, viz.—to pain, heat, and cold. Three forms are unaffected, viz.—sensibility to touch, the muscular sense, and the special senses. Thermo-anæsthesia is often overlooked. It is necessary to distinguish sensibility to heat from that to cold, for the areas do not always correspond. The alteration of sensibility to temperature is one of the first, in point of time. It varies in degree, and at some points there may be a veritable hyperæsthesia to temperature. Analgesia is equally common, and varies in degree and distribution. Sensibility to touch persists, as has been already stated, and all the sensations of temperature, as well as pricking, pinching, etc., are perceived as tactile impressions, and readily localised.

Except in so far as appertains to the permanent paralysis of the upper extremities, the disorders of motion are only secondary. They consist of spasmodic paraplegia, rarely complete, or of inco-ordination of the lower limbs. The patellar reflexes may be exaggerated or abolished. Scoliosis, which is almost a constant feature of syringomyelia, makes its appearance at a relatively early age. It attacks the dorso-lumbar region, and has its convexity to the left.

Of the trophic changes, the most constant are the muscular atrophy. It commences in the hands, attacking the muscles supplied by the radial nerve, or those supplied by the median and ulnar. The atrophy afterwards extends slowly and symmetrically to the forearm, arm, and trunk, resulting in deformities like those caused by other progressive myopathies. The skin is often affected with glossiness, and with eruptions, such as bullæ, herpes, etc. The subcutaneous cellular tissue is sometimes œdematous; in others, abscesses and whitlows are present. Vascular disorders are of common occurrence. The extremities are frequently cold and cyanosed. In other cases, there is intense redness of the extremities, with swelling of the fingers, and increased temperature of the parts. The joints are sometimes the seat of arthropathy like those of tabes, and the bones may be thickened, brittle, or the seat of exostoses.

The lesions of syringomyelia, in rare cases, may extend to the bulb, and bring about disorders of deglutition, circulation, and respiration. Inequality of the size of the pupils has been observed, and a unilateral narrowing and straightening of the palpebral slit has also been noticed.

The form of the disease which is above described is a mean type. Various forms, however, occur. Dr. Blocq thinks two principal types may be distinguished, depending on the localisation of the neoplasm. In one form it commences with an atrophy of the muscles supplied by the ulnar nerve, and is accompanied by spasmodic phenomena of the lower limbs. The other begins by an atrophy of the muscles supplied by the radial, and is accompanied by tabetic symptoms in the lower limbs. Syringomyelia always commences insidiously, and is always advanced before the physician can be sure of the symptoms. Sometimes the trophic changes, consisting of a succession of whitlows or indolent ulcers, begin the attack; sometimes alterations in sensibility, which give rise to curious conditions. In many cases, the motor disturbances occur first, and functional weakness of the muscles may be the first warning the patient may have. The disease progresses slowly, and the course is varied by exacerbations and remissions. Death may be due to secondary complications, as gangrene, cystitis, perforation of the bladder, or bulbar complications may supervene. In making the diagnosis, there is no symptom which may be said to be pathognomonic, and it is only by appreciation of the symptoms as a whole that the question can be decided.

The treatment can be scarcely more than symptomatic. The atrophy of the muscles may be combated by electricity. The bladder symptoms may be attended to. Iron, quinine, and other tonics may be administered. Counter-irritation to the spine may be tried. Suspension, which has apparently given good results in tabes, is worth a trial in this disease.

J. B. Ball, M.D.

Article 978.

GANGRENOUS ASSOCIATION OF SEPTICÆMIA WITH TETANUS.*

At the meeting of the French Academy of Sciences, held on 3rd November, Prof. Verneuil communicated an interesting paper on this subject. The coexistence of gangrene and of tetanus has long been familiar to surgeons, who have noticed that the latter disease was frequently consecutive to contused wounds, comminuted fractures, burns, frost-bites, &c.; in other words, to wounds which are liable to be complicated by primary gangrene, or by gangrenous inflammation. Still, as these cases are relatively rare in proportion to those in which tetanus follows trifling wounds, devoid of serious local symptoms, and apparently running a perfectly natural course, it has appeared very doubtful whether the association of the two affections was not the result of a mere coincidence, and it has never been clearly proved that the occurrence of gangrene in a wound specially favoured the subsequent onset of tetanus. At any rate, those surgeons who believed in this coincidence have never as yet furnished any proof of, or reason for, the faith that was in them. Verneuil considers that the matter is now susceptible of explanation, thanks to the light thrown on the subject by experimental investigation and clinical experience.

It is now a well-known fact that cultivated soil contains various pathogenic microbes, the most important of which are probably the septic vibrio of Pasteur, and Nicolaier's bacillus of tetanus. Inoculations of this virulent earth performed on animals give rise to two most formidable diseases: gangrenous septicæmia due to the vibrio, and tetanus due to the bacillus. The two microbes, generally existing together in the same infected soil, inoculation causes sometimes the one disease and sometimes the other; and this in variable proportion, one sample of soil producing, for instance, eighty cases of septicæmia and twenty of tetanus, and another sample producing the two diseases in inverse ratio. On account of the unequal activity and differing periods of incubation of their respective microbes, the two affections do not make their appearance after the same interval; septicæmia occurs in a few days, or even hours, while tetanus does not come on until the fourth or fifth day, or even later.

Notwithstanding the very numerous inoculations that have been practised, and that have been followed by septicæmia and tetanus, it does not appear that the former disease has ever been known to be followed by the latter in the same animal, nor, conversely, has the latter disease, once established, been complicated by the former. In other words, the evident association of the two microbes in the same earth inoculated on animals has never yet resulted in the development, either simultaneously or in succession, of the two diseases, a fact which seems to prove their complete independence. Gangrenous septicæmia, however, is very rapidly fatal in animals, and this fact explains, perhaps, why it is never followed by tetanus, as there is not sufficient time for the latter disease to be developed.

In human pathology, judging from clinical facts correctly interpreted, the course of events is somewhat different, and observation has shown that if cultivated soil be brought in contact with wounds in human beings, it can infect them in the following way:—

> (1) By causing the gangrenous septicæmia of Pasteur, "which," as has been remarked by Cornil and Babès, "is often caused by comminuted fractures or severe contusions, *especially if the wounds have been contaminated by contact with the ground.*"
>
> (2) By causing tetanus; a fact only recently established, but at present clearly proved.

So far, then, the facts in man and in animals are in accordance, with the trifling difference that in man septicæmia of telluric origin seems to be rarer than tetanus. The incubation periods differ but little in man from those in animals, the first disease appearing more quickly than the second; but both diseases are somewhat slower in their onset, septicæmia usually appearing about the second or third day, and tetanus about the seventh.

Although both diseases are of extreme gravity in the human species, gangrenous septicæmia, whether owing to the fact that it is usually energetically treated, or because it is possible sometimes to remove it by radical measures, is not always fatal in man, or, at any rate, does not kill with such rapidity; whence it results that the prolongation of life allows the tetanic virus to complete its incubation period—a circumstance which accounts for the simultaneous existence of the two diseases—a combination unknown in animals, but many times observed in man.

Verneuil has already published several of these cases,* and he now gives particulars of three others. The first is that of a cavalry soldier, who sustained a compound comminuted fracture of the forearm by a fall from his horse, the wound being contaminated by the dust and earth of the riding-school in which the accident occurred. An attempt was made to save the limb, and at first all went well; but on the third day a sudden change set in, the forearm became swollen as far as the elbow, and intensely painful, and soon presented all the characters of gangrenous septicæmia. Amputation was at once performed by the military surgeon in charge of the case, and the gangrenous process was arrested; but four days later, or seven days after the accident, tetanus set in, and proved fatal on the twenty-second day, the amputation wound being by that time soundly healed. The other two cases occurred in the practice of Prof. Tédenat, of Montpellier. The first was that of a man who, by a fall from a horse, sustained a compound dislocation of the wrist. The wound was found to be soiled by manure and earth, and a violent rigor occurred an hour later. Gangrene appeared next day, and tetanus seven days later, and carried off the patient in forty-eight hours. Tédenat's second case was a compound dislocation of the ankle in a young girl. The lower end of the tibia came in contact with the ground, and the articular cartilage was encrusted with dust. The accident occurred in the neighbourhood of a slaughter-house. On the third day, diffused superficial gangrenous inflammation set in and extended to the knee. Multiple incisions were made in the diseased tissues. On the twentieth day tetanus appeared, but the patient recovered. Subsequently resection of the ankle-joint was performed, and the patient ultimately had a useful limb.

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* See *La Semaine Medicale*, Nov. 5, 1890.

* *Revue de Chirurgie*, 1888.

The remarkable similarity of the results of experiments on animals and of clinical observations induces Verneuil to consider that the following propositions are sufficiently established : —

(1) The coincidence in man of certain forms of gangrene and of tetanus is not due to chance.

(2) It results from the simultaneous introduction into a wound of the microbes of Pasteur and Nicolaier, which are frequently found together, especially in cultivated soil.

(3) The two diseases, contemporary in their origin, are developed each in a distinct and different manner, in accordance with the characteristics proper to the microbe of each, and without apparently influencing each other.

(4) The development of gangrenous septicæmia in a wound contaminated by contact with earth should give occasion to dread the subsequent appearance of tetanus; but the real independence of the two infections is proved by the fact that the complete removal by amputation of the seat of the first disease does not prevent the subsequent development of the second.

(5) All these facts seem to prove that there is in these cases a morbid association, pure and simple, due to the fortuitous presence of the two microbes in the soil.

Gangrenous septicæmia is not the only virulent disease associated with tetanus, as this last has been recorded as complicating malignant pustule, erysipelas, typhoid fever, malaria, and tuberculosis; but these cases, in addition to being extremely rare, have not been recorded with sufficient detail to admit of our forming any conclusion as to the mutual relations of the separate infections. It is interesting to note that the most common of all traumatic poisons, pyæmia, has apparently never been found associated with tetanus. There is, perhaps, here, in Verneuil's opinion, a real antagonism. W. A FitzGerald, M.D.

Article 979.

THE POISON OF TETANUS.*

At the meeting of the French Society of Biology, held on November 15, Drs. Vaillard and Vincent made known the results of recent investigations which they had undertaken, with a view to determine the exact nature of the tetanic virus.

It is a well-known fact that in patients suffering from tetanus, and in animals experimentally inoculated with it, the pathogenic agent of the disease, Nicolaier's bacillus, does not multiply greatly in the organism, and is only found in the neighbourhood of the wound or point of inoculation. This fact has given rise to the belief that the bacilli secrete an active poison which becomes disseminated through the entire body. In order to demonstrate the existence of this poison, the authors passed a pure culture of the bacillus through a porcelain filter, such as is used by Pasteur for the purpose of depriving a fluid of the microbes contained in it. The liquid thus obtained, which has an alkaline reaction, is extremely poisonous, the one-hundredth part of a cubic centimètre injected under the conjunctiva of a guinea-pig causing severe tetanus, which proves fatal in thirty-six hours. The one four-hundredth part of a cubic centimètre injected into the muscular tissues causes an attack of tetanus, localised to the limb in which the inoculation has been performed; but this same liquid introduced, even in huge doses, into the stomachs of guinea-pigs produces no tetanic symptoms whatever. What, then, is the nature of this poison secreted by Nicolaier's bacillus? Believing it to be a ptomaine, Brieger and, more recently, Kitasato and Weyl have succeeded in isolating several alkaloids, and amongst others, a hydrochlorate of tetanine, the inoculation of which in large doses produces convulsive and paralytic phenomena. Kund Faber, however, has come to the conclusion that the tetanic poison presents the greatest possible analogy, from a chemical point of view, to snake-poison, and to the bodies known as diastases, more especially to the diphtheritic diastase described by Roux and Yersin.

The authors believe that their researches establish the probable diastasic nature of the tetanus poison. Thus it is weakened by exposure for twenty minutes to a temperature of 60° Centg., and is rendered completely inactive by a temperature of 65°. Exposure to air and light rapidly deteriorates it, but prolonged exposure to sunlight has no effect, provided that it be protected from contact with oxygen. Acidulation of the filtered liquid does not alter its toxic power, but absolute alcohol precipitates it partially. The precipitate inoculated into animals causes tetanus. Like the diphtheritic diastase, the tetanic poison possesses the property of adhering to certain precipitates, such as the phosphates of lime and of alumina, and these precipitates, carefully washed with sterilised distilled water, cause in guinea-pigs intense and fatal tetanus.

From these facts it is evident that the poison is not an alkaloid, and that in many ways (action of a moderate temperature, of oxygen, of sunlight, precipitation by alcohol, adherence to phosphatic precipitates) it strongly resembles the diastases and the venom of snakes. Like these bodies, it produces no effect, when introduced even in large quantities, into the stomach, although when inoculated it is poisonous in minute doses. Its extreme virulence is shown by the fact that half a milligramme of dried precipitated phosphate of lime to which the poison has adhered is sufficient to kill a guinea-pig. If the weight of the phosphate, calculated by calcination, be subtracted, it is evident that the organic matter contained in this dose does not exceed fifteen-hundredths of a milligramme, and it is probable that a certain proportion of this infinitesimally small quantity is composed of innocuous albuminoids carried down along with the poison by the precipitated phosphate.

W. A. FitzGerald, M.D.

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* See *La Semaine Medicale*, Nov. 19, 1890.

ARTICLE 980.

THE MIDWIVES' REGISTRATION BILL.

UNDOUBTEDLY the most pressing question of the moment in medical politics is the Midwives' Registration Bill. This is a Bill which has sprung into existence in a manner which could not fail to bring it into conflict with the bulk of the profession. As a matter of fact, the opposition against it has been gathering day after day since the precise terms of it came to be more widely known. There is no cause for wonder at this result, if it be borne in mind by whom the Bill has been framed. The promoters of the Bill consist of five laymen and two medical men. It is not needful to discuss the question of the amount of practical experience upon the subject of midwives possessed by the former; and of the latter, it can only be said that their position in the profession absolutely precludes them from being directly in touch with the work of midwives, and of the requirements in connection therewith. Thus, strictly speaking, the introduction of the Bill is equivalent to an attempt being made to legislate upon a matter by a certain number of Members of Parliament, who, however worthy in other respects, cannot be said to have grasped the situation. But who, we may ask, is most likely to know how such a Bill should be framed? There can be only one answer to this question, namely, the general practitioner. Astounding, however, as it may seem, he has never been consulted in the matter. Throughout the whole of the preliminary proceedings in connection with the preparation and introduction of the Bill, he has been severely ignored. The general practitioner, it is indisputable, is alone in the position of being able accurately to guage the precise requirements of a Bill of the kind under discussion. He comes in almost daily contact with midwives and their work, and this being the case, in common fairness, no attempt at dealing legislatively in the matter should be made until his experience has been brought to bear upon the points at issue. For the present, there is nothing left to the great body of the profession saving vigorous and uncompromising opposition to the Bill now before the House of Commons. If this Bill is thrown out, as we trust it will be, its fate will "point a moral and adorn a tale"; in other words, in our opinion, before any Bill dealing with matters directly affecting the medical profession is introduced into the House of Commons, it should first be submitted to the General Medical Council. The General Medical Council is the parliament of the medical profession, or if it is not, it ought to be; and, as representing the profession, the Council should place itself in the position of being able to say definitely whether or not any proposed legislative measure commends itself to the profession generally. In the present instance, and in the face of such opposition, the Council cannot pledge their support to the Bill. Consequently, the melancholy fact remains that the House of Commons will be asked to pass a Bill, in which the bulk of the members can take no possible interest. and one against which the promoters must admit the greatest opposition has been raised by the medical profession, whom it directly affects.

THE will of Sir Edwin Chadwick, the father of sanitary reform, who died in July last, has been proved under a personalty of £47,700. Dr. Richardson, F.R.S., to whom a legacy of £200 is bequeathed, was appointed executor.

Anatomy and Physiology.

RECENT PAPERS.

981. IVANOFF, DR. EVGENY E.—On the Morphology and Dietetics of Human Milk. (*St. Petersburg Inaugural Dissertation*, 1890, pp. 86, with 25 drawings.)

982. KADKIN, DR. PETR K.—On the Histology of the Mamma during Pregnancy and Lactation. (*St. Petersburg Inaugural Dissertation*, 1890, No. 33, pp. 40, with 10 illustrations.)

983. ANDERSON, DR. W., AND MAKINS, DR. G. H.—On the Planes of Subperitoneal and Subpleural Connective Tissue, with their Extensions. (*Jour. of Anat. & Phys.*, vol. xxv., p. 78.)

984. SCHMIDT, DR. E.—On a Case of Giant Growth. (*Arch. für Anthropol.*, xviii. 4; *L'Anthropologie*, i. 4.)

985. FLORENCE MAYO.—On the Superior In-Incisors and Canine Teeth of Sheep. (*Bulletin of the Museum of Comparative Zoology*, xiii. 9.)

986. SCHWALBE, DR. E.—On the Pointed Ear in the Human Embryo. (*Anat. Anzeig.*, Jarg. vi., No. 6.)

ART. 981. *Ivanoff on the Morphology and Dietetics of Human Milk.*—Dr. Evgeny E. Ivanoff, of St. Petersburg, has studied a morphological composition on human colostrum and milk, as well as its influence of the infant's nutrition. The colostrum was obtained from seventeen healthy or "relatively healthy" pregnant and puerperal women, aged from nineteen to thirty-five, most of them being primiparæ. In some cases the examination was commenced as early as fifty-five days before labour, being repeated, every from three to seven days, until the appearance of normal or proper milk. The latter was derived from about two hundred healthy or "relatively healthy" wet-nurses, belonging to working classes (mostly to peasantry). The following are the principal corollaries deduced by the author from his able and interesting investigations:—(1) The colostrum corpuscles (Donné's "*corps granuleux*") are undoubtedly of an epithelial origin. (2) As Nasse and Temesvary have pointed out, in multiparæ colostrum transforms into proper milk more quickly than in primiparæ. (3) The time of the disappearance of the colostrum cells is dependent upon (*a*) the number of labours, (*b*) the woman's general health, and (*c*) puerperal affections. In primiparæ, the corpuscles usually disappear from milk on the third to the sixth day after labour; in multiparæ, on the second to the fourth (seldom later) day. In generally sickly or badly nourished women, they may persist to appear in considerable numbers for a fortnight, or even longer. Puerperal affections similarly distinctly retard the disappearance of the colostrum bodies. (4) In about 50 per cent. of suckling women the corpuscles reappear with the commencement of involution of the mammary gland after the tenth month of lactation. Such "late colostrum cells," however, differ from the early in their being of a somewhat smaller size (under 15μ) and presenting a finer granularity and a more scanty number of fat droplets. (5) Human milk contains, as further normal constituents, some peculiar colourless and transparent hyaline bodies, which, as a rule, are attached to fat globules in a cap-like fashion, but now and then may be seen lying free, in the shape of globules. "Their appearance in milk seems to coincide with the stage of the highest functional tension of the mammary gland during suckling." (6) In individual cases, as well as in the same subject, fat globules (or "milk corpuscles") vary in diameter from 1μ to 7μ and even 10μ. In this regard there may be distinguished three categories of the globules; middle-sized ones, of from 3μ to 5μ in diameter; large-sized, of from 5μ to 7μ; and small-sized, of from 1μ to 3μ. (7) As a rule, the number of fat globules proves to stand in a direct relation to their size, as well as to the number of cellular elements suspended in milk (epithelial cells, leucocytes, etc.), but in an inverse one to the number of granules (*débris* of cellular elements, etc.). (8) In young, healthy, strong, and well-nourished women, milk always contains larger numbers of fat globules and cellular elements, and the globules themselves are of an average larger size, than in the middle-aged, sickly, and badly nourished. (9) The last portions of milk sucked out by the infant are poorer in fat globules than the first portions, the globules themselves in the former being of a smaller size. (10) The most reliable and important criterion for determining the nutritive value of milk is constituted by a numerical strength of fat globules present therein; the next place is occupied by the size of the globules; then follows the number of cellular elements and, lastly, that of granules. (11) Such milk as contains upwards of 3·5 per cent. of fat (fat globules) is borne by young infants generally worse than a milk with an average proportion (from 2 to 3·5 per cent.) of fat. (12) A large size of fat globules distinctly lowers the nutritive value of milk, more especially when the latter contains a large proportion of fat. Such milk is tolerated by infants rather badly. (13) The maximum daily increase in the infant's weight (27·7 grammes) is observed in the case of milk with a medium number of middle-sized fat globules. (14) In the case of milk with a small number of small-sized fat globules, an average daily increase in the weight amounts to 16 grammes; in the case of milk with a rich proportion of large-sized globules, the daily gain oscillates about 19 grammes. (15) Generally speaking, sickly young women are the worst wet-nurses, the daily increase in the child's weight being about 4·5 grammes (on account of frequent dyspepsias). (16) The microscopical examination of milk furnishes most reliable indications in regard to its dietetic value—provided the examination is made immediately after obtaining milk from the woman's breast.

982. *Kadkin on the Histology of the Mamma during Pregnancy and Lactation.*—Following Professor A. A. Dostoievsky's suggestion, Dr. Petr K. Kadkin, of St. Petersburg, has undertaken a histological research (in Prof. F. N. Zawarykin's laboratory) with he view to elucidate the following points (which still continue to cause discrepancies between authors):—(*a*) Do leucocytes take any part in the functional action of the mammary gland? (*b*) Are the alveolar epithelial cells destroyed on the formation of milk-fat? And (*c*) how does the epithelial nucleus behave with regard to the milk-secretion? The materials for the purpose were derived from cows, pigs, rabbits, white rats, and grey mice, the glands being excised either from a live animal or immediately after killing it. The outcome of the research may be briefly sketched somewhat as follows:—(1) During pregnancy the interalveolar connective tissue of the mamma proves to contain considerable numbers of leucocytes, which elements may be also detected between the alveolar epithelial cells, as well as in the alveolar cavity itself and its duct. The leucocytes found in the latter two situations show signs of fatty degeneration of all stages. All the facts justify the conclusion that during pregnancy leucocytes penetrate into the alveolar cavities to undergo therein a fatty degeneration, and to thus transform into the colostrum corpuscles. Such of the cells, as have not yet undergone a complete degeneration may possess amœboid motion (observed by Stricker and Schwarz in the colostrum corpuscles). (2) During lactation leucocytes are similarly met with both in the epithelial lining and alveolar cavities, wherein disintegration of their nuclei supplies the milk with a certain proportion of its nucleine, the remaining amount of the latter being furnished by the epithelial cells, some of which undergo a peculiar albuminoid degeneration with ultimate destruction of their protoplasm and nuclei. (3) The colostrum and milk-fat is formed in the alveolar epithelium, which undergoes fatty degeneration. In a colostrum mammary gland, a certain number of epithelial cells gradually becomes choked with fat to be ultimately detached from the alveolar wall, the shed elements being replaced by young ones which arise through a karyokinetic or indirect proliferation. During lactation, however, no such destruction of the epithelium is observed, the milk receiving its fat-supply simply through absorbing (or washing out) fatty globules forming about the inner extremity of epithelial cells. (4) Karyokinetic changes in the epithelium of the mammary gland are most pronounced during the second half of pregnancy. They also occur during lactation, but to a much lesser extent. (5) In the absence of lactation, shortly after labour, the epithelial nuclei undergo a degenerative process which resembles Flemming's chromatolysis. (6) The degeneration of the mammary epithelium (*vide sub.* 2), occurring during lactation and characterised by the formation of coaguli in the protoplasm and disintegration of chromatine of the nucleus, is most intense in multiparæ (provided each labour was followed by lactation). VALERIUS IDELSON, M.D.

983. *Anderson and Makins on the Planes of Subperitoneal and Subpleural Connective Tissue, with their Extensions.*—At the conclusion of this interesting paper, the authors remark that in the endo-thoracic, and intra-abdominal fasciæ, we have a tissue which morphologially arises from the same embryonic layer as the vessels, and is destined to accompany and serve them wherever they go. It forms sustentacular sheaths for the vessels and nerves, and various organs within the trunk, and follows them into the intermuscular spaces of the trunk, neck and extremities, binding down the invested structures in such a manner as to maintain their due relations to one another, and to the walls of the containing cavities, filling up the irregular spaces between them, and conveying to them their vascular and nervous supply. It affords a medium of communication between visceral and parietal vessels, and between the vessels of different viscera. It has important suspensory functions in connection with the membranous and solid viscera, especially in the abdomen, and it serves as a storehouse for fat. Surgically it explains the presence of mysterious deep fascial layers, the identity of which has often exercised the minds of operators in the course of incisions for cobotomy and nephrotomy. Its relation to the subclavian artery, on the one hand, and to the pleura on the other, may account for some of the casualties attached to the ligature of that vessel. Its continuity with the axillary fascia around

the perforating vessels may explain the occasional pleuritic complications of axillary abscess; and its extension over the spermatic vessels may afford a solution of the problem of peritonitis following castration. Its laminated structure exercises an important influence upon the course of pathological exudations, especially in the mediastina and pelvis. Undue laxity of the tissue may favour displacements of certain organs, as in movable kidney, and, as Mr. Lockwood has pointed out, in hernia. Its extrusion through normal or adventitious apertures, in the walls of the thorax, or abdomen, may open the way for hernial protrusions, or may itself constitute a kind of hernia, as in the linea alba and elsewhere. A hernia may be reduced *en masse* between its layers, and, finally, it may serve as a nidus for fatty tumours and other morbid growths.

BERTRAM C. A. WINDLE, M.D.

984. *Schmidt on a Case of Giant Growth.*—Elizabeth Lyska, a girl of less than twelve years, was born in the Russian province of the Don, of parents of normal size; she had three brothers and the same number of sisters, all of whom were of ordinary size. Up to the age of twelve and a-half years, there was nothing remarkable about her growth, but at this time it became very rapid, the increase being especially marked between the ninth and tenth years, her height at the age of eleven and a-half being 1.935 m. There can be no doubt as to her age, which is sufficiently attested by the state of her dentition. Her health has been always excellent, and her thoracic organs are healthy. The hair of the head is abundant and brown, that of the body is little developed. The breasts are very small, and the pelvis little inclined.

985. *Florence Mayo on the Superior Incisors and Canine Teeth of Sheep.*—In the embryo sheep, at a certain stage of development, the dental lamina exists throughout the canine and incisor regions of the upper jaw. Its anterior portion, which is the last to develop, and the first to abort, does not attain so prominent a condition as its lateral portion. After advancing in development for a time, it retrogrades and finally disappears. In the canine region, the dental lamina gives rise to an enamel germ, which never reaches a stage of functional activity; for neither are its central cells transformed into a stellate reticulum, nor do those of the malpighian layer ever produce enamel, and in later stages both disappear. In this region there is no trace of a dentine germ. The fact of the existence, in sheep, of such organs as usually result in the formation of teeth is of interest, because it is one of those peculiar structures for which it is difficult to account without the aid of the theory of natural selection. From the observations above recorded, it is readily to be seen that the disappearance of the superior incisors and canines is progressive. In the region of the incisors, the evidences even of the beginning of teeth development have almost disappeared, the region of the first incisor being the least differentiated portion of the tract, while the canine region is represented by a moderately large, but functionless enamel sac. Since, in some ruminants destitute of incisors, small rudimentary canine teeth are found on the upper jaw of the adult animal, it is a fair inference that the teeth are being lost from before backwards, and that the canine teeth, the last to disappear from the sheep, are in such cases undergoing degeneration, although not wholly functionless.

986. *Schwalbe on the Pointed Ear in the Human Embryo.*—Darwin first described on the posterior border of the ear a more or less pointed prolongation, which he regarded as a relic of the pointed ear of animals. The position of this point is still discussed, some placing it, with Darwin, a little above the level of the inferior branch of the antihelix: others, with Hartmann, at the most elevated part of the helix. This last idea expresses the shape given by the ancients to the ear of the Satyrs; on the contrary, amongst the anthropoids a rudimentary point is found a little above the horizontal branch of the antihelix. In the adult man the following forms may be recognised:—(1) The posterior border of the pinna is not turned in, and the point looks backwards: this condition is also met with in the macaque. (2) The point is situated lower down on the posterior border which is not turned in; this is the cercopithecus type. (3) The posterior border is turned in, and the point looks forwards; it may be either a true point or a tubercle; this is the form described by Darwin. (4) If, in place of an infolding, the helix is only represented by a thick round border, the point is no more than a cartilaginous thickening of this border. (5) If the helix is both turned in and thickened, it is difficult to distinguish the point. In these cases, at the summit of the ear, may be found an acute angle simulating the pointed pinna of the Satyrs. In the human fœtus of the fifth month, the free border of the pinna presents no appearance of turning in; it is but little thickened and scarcely distinct from the rest of the surface. It presents two angles, one at the summit, the other a little below the level of the branch of the anti-helix. Towards the sixth month, the helix commences to turn in near its insertion, and then the resemblance is complete to the ear of the cercopithecus. In both cases, the turning in passes beyond the superior angle, which leaves as its trace an enlargement of the border. In the genera cynocephalus and macacus, the posterior border of the pinna is not straight as in the cercopithecus and the human fœtus; it is a little concave, which causes the point to project considerably. This condition recalls that which is found in long-eared animals, the superior border is convex, the posterior curved in a sinuous manner. In both cases, the point of the ear is a homologous organ, and it is legitimate to admit that the human fœtus of the fifth to the sixth month possesses a truly pointed ear like other animals. This point is found at the level of the postero-superior angle, at the union of the first and second-thirds of the circumference of the free border. It is the same in the cercopithecus. In the human adult, the point is usually situated a little lower. In rarer cases, the ear presents in the fœtus the form peculiar to the macaque, a rounded superior border, concave posterior border, with a prominent point at the union of the two borders, and this form may persist in the adult. At the commencement of the seventh month, the helix becomes incurved, and produces the different forms met with in the adult. It is the same with the anthropoids, the chimpanzee having the pinna most similar to that of man; in the orang, on the contrary, the point of the ear completely disappears.

ACCORDING to the *Médecine Moderne* the average number of suicides among schoolboys in Germany during the last seven years has been at the rate of 50 per annum, the number in 1888 having reached 66. Of the total number 240 were males and 49 females.

Surgery.

RECENT PAPERS.

987. Taylor, Dr.—On a Ready Method for Counter-Extension at the Knee. (*Boston Med. and Surg. Jour.*, Oct. 1890, p. 361.)

988. Stimson, Dr.—On Reducing Dislocations of the Femur on the Dorsum Ilii. (*La Semaine Médicale*, November 26, 1890.)

989. Vander Veer, Dr.—On Certain Difficulties of Abdominal Surgery. (*Amer. Assoc. of Gyn. and Obst.*, Sept. 17, 1890; *Philadelphia Med. News*, Oct. 25, 1890.)

990. Ripley, Dr. J. H.—On a Point of Diagnosis in Pott's Disease. (*Philadelphia Med. and Surg. Reporter*, Oct. 25, 1890.)

991. Graham and Clubbe, Drs.—On a Case of Successful Removal of a Hydatid Cyst pressing on the Motor Region. (*Aust. Med. Gaz.*, Sept. 1890.)

992. Martin, Dr. E.—On a Case of Epididymitis caused by Abdominal Strain. (*Med. News*, Nov. 29, 1890.)

993. Davis, Dr.—On a Case of Re-union of Cut-off Tongue. (*North-West Med. Jour.*, Nov. 1890.)

994. Pant, Dr.—On Two Cases of Supra-Pubic Lithotomy. (*Ind. Med. Gaz.*, Nov. 1890.)

995. Keys, Dr. E. L.—On a Case of Nephrectomy from Adenoma of the Kidney. (*Amer. Jour. Med. Sci.*, December 18th, 1890.)

996. Scott, Dr. M. T.—On a Case of Laparotomy for Gunshot Wound of Intestine. (*New York Med. Rec.*, Nov. 8, 1890.)

997. Surgery of the Nervous Centers. (*Rev. de Therapeutique.*)

Art. 987. *Taylor on a Ready Method for Counter-Extension at the Knee.*—Dr. Taylor describes a ready method for applying counter-extension in cases of inflammation of the knee-joint. The author states that he is convinced that the early application of some form of counter-extension is of extreme importance in these cases; fixation alone or simple traction by means of the weight and pulley, give by no means the same result, and the author has often given instant relief to patients by using careful counter-extension. The first step in the dressing is the application of adhesive plasters to each side of the leg and thigh, so that you have four pieces of plaster, to each of which a piece of strong webbing is attached. These are fixed to the leg by means of strips of plaster wound spirally round the leg, two below the knee, and two above the knee. Buckles are attached to the ends of the webbing, so that they can be doubled on themselves, and buckled over the edge of some form of fixation splint, and thus traction is exerted upon the knee, both above and below. If flexion is moderate, two straight strips of wood-like laths or window-shade sticks, cut the proper length and provided with buckles near each end, will do very well. It is always desirable to attach five or six pounds to the lower end of the apparatus by the ordinary cord, pulley and stirrup arrangement, the knee being carefully propped and supported in the flexed position by hard cushions, or in a sling. If the patient is small, a stiff tin or zinc posterior splint could be bent to correspond to the angle of flexion, and turned up at the sides for lateral support, and to receive the buckles near the ends. Care must always be taken that no leverage, especially no prying or twisting force, is exerted upon the joint.

Richard Neale, M.D.

988. *Stimson on Reducing Dislocations of the Femur on the Dorsum Ilii.*—This method has been applied with success by its inventor, Dr. Stimson, of New York, in two cases of posterior iliac luxation, and by Dürr, of Halle, in a third case of the same kind. The cases in question were briefly as follows:—The first patient had a posterior iliac luxation of the right hip. The thigh was in a condition of flexion, adduction, and internal rotation, the knee resting on the anterior surface of the left thigh, a hand's breadth above the left knee. The slightest manipulation caused intense pain. Stimson placed the patient, lying on his abdomen, in such a way that the right half of the pelvis projected over the edge of the bed, the lower limb thus hanging freely. The thigh hung vertically, the leg being flexed at a right angle and supported at the ankle. After a few minutes of this suspension, the muscles became completely relaxed, and a smart blow in the popliteal region, delivered in a vertical direction downwards, caused the head of the femur to return into the cotyloid cavity with a characteristic snap. Stimson's second patient had a similar luxation, also on the right side. He was placed in the same position; but as, after two minutes, the muscles showed no sign of becoming relaxed, a weight of two and a quarter kilos was suspended from the popliteal region The muscles then yielded gradually, and, after two minutes and a half, reduction occurred *spontaneously*. Dürr's patient was a child, five years old. He was seen half an hour after the accident, and presented all the symptoms of a dislocation of the left femur on the dorsum ilii. The left thigh was flexed, adducted, and rotated inwards, the knee resting on the right thigh above the right knee. The head of the femur could be easily felt above and behind the cotyloid cavity, and the child screamed loudly whenever the slightest attempt was made to impart any movement to the limb. Dürr, who was acquainted with Stimson's method, placed the patient on a table covered with a cushion, in the position described above, the left thigh hanging freely. The child, who hitherto had not ceased crying and groaning, became immediately tranquil, and very soon the muscles began to show evidence of relaxation. A sharp blow with the fist, in a downward direction in the popliteal region, brought about a complete reduction of the dislocation. This method would thus appear to be a very valuable one, as no apparatus, nor skilled assistance, nor anæsthetic is required.

W. A. FitzGerald, M.D.

989. *Vander Veer on Certain Difficulties of Abdominal Surgery.*—This paper gives a perfectly candid account of a number of cases of abdominal operation. The writer, out of a large experience, has not shrunk from recording his doubts, difficulties, and mistakes, "in the hope that as the subject emerges from discussion it may be clearer to us all." Many of the points raised are of the utmost interest and importance to those engaged in abdominal surgery. Dr. Vander Veer is inclined to sanction the general idea, now everywhere gaining ground, that the surgeon can undertake with confidence almost any operation within the pelvis and abdomen; always upon the understanding, however, of the early diagnosis of the physician, and the timely summons of the surgeon. In the first case, a large fibro-sarcoma of the broad ligament was removed from a young woman of twenty-

five. There were few adhesions; the pedicle was tied, and the abdomen closed without drainage. The third day vomiting commenced, and soon became fæcal. At the autopsy a coil of ileum was found strangulated by adhesion to the sigmoid flexure. The writer asks, who will deny that if he had opened the abdomen on the third day, broken down the adhesions, and flushed out the cavity, the patient would have recovered? Again, would it not be better to fill the cavity with fluid, and leave the intestines to float about for some time after operations for malignant tumours with adhesions? The next case was that of a woman, of thirty-one, with a history of vomiting of twelve years' standing. She was much emaciated. On section, a tumour was found behind the hepatic flexure, from which adhesions extended round the gut, completely closing its calibre. The latter were broken down, but nothing further was attempted. Patient rallied from the operation. She returned home, and improved for a time, but finally vomiting set in, and she died of exhaustion. At the *post-mortem*, an hour-glass contraction of the stomach was found near its cardiac end. The tumour turned out to be a misplaced kidney, firmly adherent in its new position. The writer asks if he should have discovered the hour-glass contraction at the time of section, and if so, was there much probability that he could have loosened the adhesions? He thinks the latter might have been done by anastomosing the lower gut with the cardiac end of the stomach. But would that have been justifiable in the face of a supposed malignant tumour? The next patient had a phthisical history. An ovarian cystic tumour was removed, and the pedicle, a very short one, ligatured with soft Chinese silk On the third day she began to show signs of septic peritonitis, and died soon afterwards. On examination of the body, the ligature was found completely softened, loose, and very friable. Slight hæmorrhage had taken place, and the peritoneal cavity was filled with pockets of pus. Although the result may have been modified by the constitution of the patient, yet no doubt the imperfect ligature acted as the exciting cause. The author remarks that the patient would doubtless have been benefited by reopening the abdomen on the fourth day, washing it out, putting in a drainage-tube, and, if necessary, controlling hæmorrhage. In the next case, a huge multilocular cystic tumour, weighing fifty-six pounds, was removed from a woman of fifty-one. She was much wasted, and had acquired the morphia habit. The tumour was found to have adhesions to every organ in the body. The abdomen was thoroughly flushed with hot water, which was allowed to remain. A glass drainage-tube was placed in the lower end of the incision. For three days there was considerable hæmorrhage, which was checked eventually by the injection of solution of subsulphate of iron. A good recovery ensued, and the case is quoted as illustrating the danger and anxiety that would have been spared by earlier operation. An instructive case is that of a labourer, aged forty-two, operated on for acute intestinal obstruction. For twenty-five years he had suffered from a left inguinal hernia, and latterly had gone without a truss. He was seized one day with vomiting and constipation after a hearty meal. Three days later there was severe pain. On the fourth day pain and vomiting ceased, and the abdomen became greatly distended. There was no appearance of a hernia. Ten days after he was seen by Dr. Vander Veer, and presented the condition too familiar to the operating surgeon when called in to these cases. Anxious look, sunken eyes, cold extremities, cyanosis, subnormal temperature, husky voice, restlessness, and every symptom of approaching death. A very little ether was given, a median incision made, and two fingers passed in to explore the ring on either side, but no trouble was found there. The operator then brought out what he believed to be a fold of ileum. This he incised, emptied out a great quantity of gas and liquid fæces, and attached the gut to the abdominal opening. Reaction was established with difficulty. The fistulous opening continued to discharge, and the patient improved rapidly. Sixteen days after the operation an attempt to force water *per rectum*, through the fistula, having been unsuccessful, Senn's apparatus for the injection of hydrogen was used. Dilatation of the large intestine ceased abruptly in the neighbourhood of the illeocæcal valve. The abdomen was again reopened, the incision being the same as for removal of the appendix. It was discovered that the fistulous opening had been made into the small intestine, very near the lower end of the ileum. The gut was accordingly joined from a point just above the fistula, with the commencement of the colon, Senn's plates and Lembert's sutures being used. Patient did well, and passed solid motions on the eleventh day. On the fourteenth day the fistula was closed by operation. He appeared to be progressing favourably, but a fortnight later suddenly developed symptoms of arterial embolism in the left lower extremity, and he died next day. At the *post-mortem* examination, extensive adhesions of the intestines were found, and about a drachm of pus at the most dependent part of the wound for closing the fistula. Where the anastomosis had been performed between the large and small intestines, union was found to be perfect, with entire absorption of the bone-plates. The operator is convinced that the patient would not have survived any more prolonged operation at the time of admission. His next case was the removal of diseased appendages in a woman of thirty. The pampiniform plexus was enormously enlarged, and appears to have been included in a common knot. Death ensued from hæmorrhage, and the writer concludes he should have secured the plexus of veins in sections. The concluding case involved an incision of great length. A woman of forty-five, married, no children, seven or eight years ago had first noticed a tumour, which had increased so as to fill the abdomen. The incision extended from the ensiform cartilage to the symphysis pubis. Supravaginal hysterectomy was performed, the neck of the tumour being removed by Tait's rope ecraseur. The vessels of the stump were tied separately, and the stump tied in sections as well. The peritoneum was then brought over stump and broad ligament, shutting the latter out from the peritoneal cavity. Patient made a good recovery.

DAVID WALSH.

990. *Ripley on a Point of Diagnosis in Pott's Disease.*—Lecturing to a post-graduate class on a case of subacute rheumatism in a child, Dr. Ripley made some interesting remarks with regard to the diagnosis of Pott's disease. Attention was drawn to this subject by the awkward way in which an object was picked up from the floor. Inspection showed that there was no angular curvature of the spine, and only a very slight lateral curvature. The ordinary symptoms, such as pain on pressure or movement, or on suspension by the head, the deformity, &c., were not absolutely diagnostic. The condition in question is of course easily recognised in many cases, but others

occur in which it is a difficult matter to say whether the patient has or has not disease of the spine. It is in these doubtful cases that the following method is of value. The patient is laid on his belly, the feet are seized with one hand, and making counter-pressure with the other hand against the spine, above the seat of the curvature, the body is carefully bowed backwards. If the case be one of true Pott's disease, the spine will not be straightened, where the curvature will be obliterated in all other cases. There could be no question as to the importance and value of this test in all cases of doubt.

991. *Graham and Clubbe on a Case of Successful Removal of a Hydatid Cyst pressing on the Motor Region.*—The authors report an interesting case of severe brain lesion successfully treated by operation. The case was that of a youth, aged sixteen years, whose previous history showed no serious illness. At ten years of age, however, he was unconscious for two days, apparently from cerebral laceration after a fall. At the beginning of the present year his memory gradually failed, and in addition to suffering from giddiness and sickness, he gradually became blind in the left eye. Weakness in both legs next appeared, and right crachioplegia. On admission to the Prince Alfred Hospital, under Dr. Graham, both discs showed post-neuritic atrophy. He was treated with large doses of bromide and iodide of potash, and improved very much in motor power. However, he had a fit, after which the right hemiplegia was much worse, and stupor began. Exposure of the arm area in the left hemisphere by trephining was then performed by Mr. Clubbe, and a hyatid byst removed, having been found to be simply pressing on the "motor" area. The wound was closed and healed by the first intention. There was some subsequent oozing of cerebro-spinal fluid, owing, perhaps, to the employment of a drainage-tube, but the patient made an excellent recovery, and has now regained the lost power. Unfortunately, the operation was performed too late to prevent atrophy, and so the patient, it is to be feared, is permanently blind.

992. *Martin on Epididymitis caused by Abdominal Strain.*—The patient, J. T., a porter, aged thirty-six years, was a strongly-built man of medium height. His father died of consumption at the age of fifty-six years; there was no other case of this disease in the family. He has always been strong, but practised self-abuse in moderation (?) until the age of twenty years, when he was married. From puberty he has suffered from a certain amount of sexual weakness, involuntary emissions taking place on slight excitement. This was still noticed after marriage, though to a less extent than before. He never had any venereal disease. Five days before he appeared for treatment, in the evening following a heavy day's work, he suffered from pain located in the lower part of the left testicle, and at the same time swelling was observed. These symptoms steadily grew worse, the pain extending into the groin. On examination, the right testicle and epididymis were found normal; the left testicle was slightly enlarged and was tender, but still soft and of normal consistence. The epididymis was hard, very tender, and about three times its natural size. The skin over this region was hot and red. An examination of the urethra showed the absence of stricture; no pus could be detected upon the instruments when they were withdrawn. A careful microscopical search of the urine was made, but no pus or albumen could be found. Rectal examination showed a slightly-enlarged prostate, moderate pressure upon which produced a desire to urinate. The seminal vesicles could not be felt. The lungs were found to be normal on examination. The patient had not suffered from rheumatism or malaria. Two days later the swelling had increased, involving the testicle; the pain on standing or walking was severe. A Langlebert suspensory bandage was applied; this gave the patient almost immediate relief and enabled him to resume his work. This treatment together with careful attention to the condition of the bowels was sufficient to accomplish a speedy cure. In the other case observed, an opportunity to make an examination sufficiently thorough to exclude absolutely the presence of posterior gonorrhœa was not offered, hence it cannot positively be asserted that it was a case of strain-epididymitis, though the evidence on the part of the patient was as nearly conclusive as this can ever be.

993. *Davis on a Case of Re-union of Cut-off Tongue.*—Dr. N. C. Davis was summoned to see a boy, seven years of age, who had been kicked by a horse on the right cheek, breaking off the first bicuspid tooth. The tongue was entirely cut off at the junction of the tip with the base, or the posterior portion of the frænum linguæ, with the exception of a few fibres of the tongue and mucous membrane on the right side. When Dr. Davis arrived, the end of the tongue was protruding from the mouth. The hæmorrhage was controlled by a dilute solution of persulphate of iron. Dr. Davis drew the base of the tongue forward with a tenaculum. Then the apex was brought into apposition with the base, and secured by five silk ligatures above on the dorsum, and seven below. The boy stood the operation well, and the hæmorrhage was trivial. The balance of the treatment consisted in syringing out the mouth twice daily with a solution of boracic acid, and putting patient upon a liquid diet. The tongue healed nicely, with the exception of a small portion on the left side, which sloughed out and left a small notch, which was nearly replaced by granulation. The doctor discharged the patient in about three weeks, with the tongue full length and articulation good.

994. *Pant on Two Cases of Supra-Pubic Lithotomy.*—Case I.—Lalu, an emaciated old-looking Hindu lad, aged sixteen, presented himself at the Srinagar Sadar Dispensary on the 10th March, 1890, with symptoms of stone in the bladder. He had once been operated upon some eight years ago for stone in the bladder which relieved him for about six months, when symptoms reappeared in an aggravated form. On sounding, the bladder was felt to be filled with one large, soft stone, there being hardly any room for the movements of the sound. Lateral lithotomy was not considered advisable, and litholapaxy was out of question, as all the lithotrites had been sent to England for repair. The choice fell upon supra-pubic lithotomy. Urine alkaline in reaction, sp. gr. 1,002, clear, watery, and containing no albumen. The patient being put under chloroform, a silver catheter was passed and retained in the bladder, through which the organ was filled with tepid boracic lotion. An incision about 2¼ inches long was made in the middle line, with its lower end well over the pubes. The bladder was then exposed and fixed with a tenaculum, and an inch-long incision was made in it with a sharp-pointed knife. There was difficulty in extracting the stone; the bladder walls were considerably hypertrophied, and grasped the stone firmly. After a good deal of manipulation,

he succeeded in removing it with a lithotomy scoop, with assistance. A soft catheter was then introduced into the bladder, and a drainage-tube through the wound. A couple of horse-hair sutures were inserted at the upper end of the external wound, otherwise both the wounds were left open. Their edges were smeared with iodo-vaseline ointment, and a clean sponge was placed over them. The stone was phosphatic, 3 oz. in weight, greatest length 3½ inches, and circumference 4½ inches. Case II.—Kashi Ram, a Hindu male, aged fifty-five, was admitted into the hospital on 16th May, 1890, as suffering from symptoms of stone for the last fifteen or twenty years. The sound detected an unusually large hard stone, which was neither considered amenable to lateral lithotomy nor to lithotrity. Next morning he was placed on the operating table, and precisely the same proceedings were gone through as in Case I.; but the greatest possible difficulty was met with in extracting the stone. By its size, shape, and hardness, it could neither be grasped nor crushed. The largest lithotomy forceps and scoops got wrenched in attempting forcible extraction. Two scoops were then used. One was introduced beneath the stone, and made to act as a lever. The stone was then grasped between the two, and extracted by sheer force without any regard for the consequences. There was necessarily a good deal of laceration of soft tissues, and free bleeding ensued which was only stopped by pressure with sponges. To ensure free drainage, it was thought best to leave both the wounds quite open with a large drainage-tube inserted. Dressing as in previous case. The stone was, at any rate externally, phosphatic; scrapings soluble in acids, but not in liquor potassæ; pyriform in shape, very hard and glistening, studded here and there with shining crystals. Longest circumference 10½ inches, and it measured 9½ inches round its broadest part; weight full 16 oz. The man died after forty hours, with symptoms of acute peritonitis.

995. *Keys on a Case of Nephrectomy from Adenoma of the Kidney.*—He saw on May 19th a gentleman, aged forty-nine, pale and feeble, who stated that he had been failing for more than a year, and for many weeks had passed urine resembling pure blood. He had been treated for alleged stomach trouble of some sort, and dieted, rested, and given astringents *ad nauseam.* Rest did not moderate the flow; on the contrary, it was commonly worse at night than by day, a peculiarity not unusual in hæmorrhage from the kidney, as Guyon has pointed out. The urine passed in his presence and brought to him resembled dissolved currant-jelly, or perhaps grape-jelly, and all that the patient passed was of this hue; he was blanched and feeble and manifestly in a fair way to lose his life by collapse from loss of the nutritive juices unless something were done to put an end to the leak. He found that the amount of urea excreted in twenty-four hours was ample. He easily excluded the bladder from disease by the well-known test of first collecting a portion of the urine passed in the author's office, then washing the bladder until the flow came away perfectly clear, then getting the patient to wait for a time and finally to pass another specimen, and finding that the last absolutely resembled what first flowed in the office, there being no bright blood in either specimen, and each being equally dense. Then under chloroform he clearly mapped out a moderate enlargement of the right kidney, and placed the alternative before the family of the patient of trying the milk-and-rest cure with certain styptics, or taking the bolder course of extirpating the kidney, hoping that the disease might not be malignant, but being unwilling to assert that it was not so. The latter alternative was chosen by the family, and, therefore, on May 28th, with one transverse incision beneath the ribs and another liberating incision downward he extirpated the kidney without any particular trouble. The only elements of special interest in an operative sense were the plain demonstration of the upward and downward movement of the kidney as the diaphragm relaxed and contracted, which was shown very clearly by a livid mass in the fatty capsule of the kidney, which could be seen to fluctuate over a space of at least two inches under the movements of the diaphragm, the dark body being watched as it went upward and downward beneath the fascia transversalis before the abdominal cavity had been finally opened. Another point was that the fatty capsule was exceedingly thin and particularly hard, so that the true capsule of the kidney adhered to the surrounding structures and had to be separated with great care and some dissection. Indeed, he feared that he must necessarily open the peritoneal cavity, so strong were the adhesions anteriorly to the lower part of the kidney. The kidney itself felt like rock; it was not very large, but was excessively hard and mottled in colour, being somewhat uneven upon its surface. Silk ligatures were used, the wound dressed as usual, and no particular disturbance occurred during the patient's recovery, except that first one and then the other leg became œdematous, the swelling being very considerable and very tense. The kidney was very hard and this rendered the prognosis very grave, particularly as an examination of the specimens by two pathologists was in favour of its being cancer. The patient, however, recovered, and he then had the kidney examined afresh, when it was ascertained to be an adenoma of that organ.

996. *Scott on a Case of Laparotomy for Gunshot Wound of Intestine.*—On August 6, 1890, the author was called to see a coloured man, aged twenty-seven. History was as follows:—The patient was standing on a street corner diagonally opposite some men who were shooting at each other. A stray bullet struck patient an inch and three-quarters above and to the right of the left anterior-superior spinous process of ilium. The attending physician at once recognized the gravity of the wound, and administering half a grain of morphine by mouth ordered the patient's immediate removal to St. Joseph's Hospital, a mile and a quarter distant. He first saw the patient, in a dimly lighted small room, about 10.40 p.m. He was a man over six feet high, extremely thin; was lying on his back with legs drawn up, expression anxious, features pinched, extremities cool, this last condition due possibly in some measure to insufficient clothing while in waggon. His pulse was 120, small, and wiry; temperature, 102° F. He complained greatly of radiating pains in abdomen, which was retracted and very hard. Though not probed, the direction of the ball seemed directly backward. An extensive adenitis was found in each groin, each bubo being as large as half a banana, and desquamating in large flakes from previous applications of tincture of iodine. Patient also suffered from gonorrhœal urethritis and cystitis, together with a troublesome bronchitis. In spite of the unpromising conditions an operation was decided upon. A median incision, four inches long was made, extending from two inches above to two inches below the navel. As soon as the peritoneum was opened several loops of intestine protruded.

These were immediately enveloped in hot, wet towels. In one of these sections of ileum they found four perforations within a distance of four inches. Two of these perforations were within a quarter of an inch of each other, with their long diameters at right angles to long axis of gut. All the perforations were elliptic. The openings were promptly closed by the Czerny-Lembert suture with fine silk. No other visceral or intestinal wounds were found. The intestines were comparatively empty, and but little of their contents had escaped into the cavity. Hæmorrhage had been slight. The bullet was not located. The peritoneum was repeatedly washed until the water came away clear. A large glass drainage-tube was used. The abdominal wound was closed by interrupted silk sutures. This step in the operation was very much impeded by the intense rigidity of the abdominal muscles, which did not for a moment yield during the entire operation. This condition baffled their endeavours to secure perfect coaptation of the cut surfaces. A dressing of iodoform, bichloride gauze, and bichloride cotton was held in place by a many-tailed bandage. A similar dressing was used on the wound of entrance. The operation lasted one hour and ten minutes, at the expiration of which time the patient was put in a warm bed, wrapped in blankets, and surrounded by hot bottles. Pulse, 130; temperature, 101° F. He awakened promptly after the operation, and expressed himself as feeling comfortable. The remainder of the night was passed quietly; no vomiting, no drainage. Nothing was allowed by mouth, but frequent hypodermic injections of whiskey were used. Seven hours after completion of operation, or at 8.30 a.m., August 7th, his pulse was 112, and temperature $100\frac{3}{5}$° F.; tube was discharging a sero-sanious fluid without odour. One-quarter of a grain of morphine was used to allay restlessness. Frequent observations of pulse and temperature during the day revealed nothing of interest until 6 p.m. At this time pulse was 116; temperature, 101° F.: the discharge from tube was abundant, brown, and had a distinct feculent odour. Slight delirium was also noted. A hypodermic of one-fourth grain of morphine was given. At 10.30 p.m. pulse was 126; temperature, $101\frac{3}{5}$° F.; discharge abundant, and same in character as last noted, though the feculent smell was less marked. August 8th, at 1 a.m., pulse was 132; temperature, $101\frac{1}{5}$° F. Vomited a dark fluid, about two ounces. Discharge from tube more serous. On the 6th day the bullet was located, almost subcutaneous, three inches to the left of spine and one inch below the iliac crest. It was extracted under cocaine anæsthesia. Its removal was accompanied by the discharge of about one drachm of thin, ill-conditioned pus. The bullet was a thirty-eight calibre, conoidal ball, weighing one hundred and forty-three grains, slightly roughened by impingement on ilium, around which it was deflected. The stitches were removed on the seventh day, and by Sept. 8th the patient was able to leave his bed.

997. *Surgerg of the Nervous Centers.*—Operative intervention is indicated in each case when we find ourselves in the presence of a traumatic lesion involving the brain, principally in young subjects, if the lesion does not cause epilepsy or mania it may very well cause arrest of development. In cerebral hæmorrhage an immediate intervention may prevent thrombosis and its consecutive paralysis. This intervention consists in the ligature of the primitive carotid. The author has performed this operation twenty times, and his experimental researches on the subject have proved to him that this ligation completely arrests the hæmorrhage in the region affected. Trepanation in cases of meningitis has not been followed with success in pachymeningitis; excision of fragments of the thickened dura-mater may be productive of some results, but it is especially in cases of localized diseases, tumours, Jacksonian epilepsy, that surgical treatment promptly applied has produced good results. Cerebral gummata are, according to the author, subject to the same treatment, specific treatment being insufficient to cause their total disappearance. The mortality of trepanation is twenty per cent. Trepanation of the vertebral column, indicated in puncture of the vertebræ with symptoms of compression of the cord, is a difficult operation, offering but few chances of success.

Medicine.

RECENT PAPERS.

998. Wheeler, Dr. L.—On Laparotomy for Tubercular Peritonitis. (*Medical Communications of the Massachusetts Medical Society*, vol. xv., No. 1, 1890.)

999. Neve, Dr. (Edinb.), E. F.—On the Diagnosis of Enteric Fever. (*American Journal of the Medical Sciences*, October, 1890.)

1000. Vaughan, Dr. Victor.—On the Chemical Study of the Summer Diarrhœas of Infancy. (*Arch. of Pædiatrics*, Nov. 1890.)

1001. Talamon, Dr. Ch.—On Appendicitis and Perityphlitis. (*La Médecine Moderne*, Nov. 13, 1890.)

1002. Jaksch, Von.—On the Diagnosis and Treatment of Diseases of the Blood. (*Centralb. f. d. med. Wiss.*, No. 45, Nov. 8, 1890.)

1003. Hehir, Dr.—On a Case of Anasarca and Albuminuria from Tight Lacing. (*Indian Med. Gaz.*, November 18th, 1890).

1004. Tancil, Dr.—On a Case of Recovery from Traumatic Tetanus. (*Cincin. Lancet-Clinic*, Nov. 1, 1890.)

1005. French, Dr. R. T.—On Death from Intrapulmonary Injection. (*Medical News*, November 29th, 1890.)

1006. Woodbury, Dr.—On a Case of Osteo-Malacia. (*Times and Register*, November 22nd, 1890.)

1007. Epilepsy of Nine Months' Duration following Dental Caries. (*La Bulletin Médical.*)

Art. 998. *Wheeler on Laparotomy for Tubercular Peritonitis.*—The author arrives at the conclusion, based on a personal experience of two cases and the study of a large number of recorded instances, that laparotomy is a justifiable method of treatment of tubercular disease of the peritoneum under certain conditions. These are: the presence of much ascites, the absence or small amount of solid masses, the primary origin of the disease in the peritoneum, the presence of encysted or pocketed purulent collections, and intestinal obstruction. The last two conditions are held peremptorily to indicate the operation; and in reference to the presence of tubercle elsewhere in the same subject, it is suggested that, when this is not in extensive amount, the procedure is not thereby contra-indicated. Should, however, there be no ascites present, should there be abundant masses found in the abdomen, when the disease is secondary to advanced general tuberculosis, or if intestinal ulcers exist, then under each of these conditions laparotomy is unlikely to be of any benefit to the patient. During the discussion which followed the reading of the paper, Dr. J. W. Elliot, of Boston, commenting on the greater frequency of peritoneal tuberculosis in women as compared with men, expressed the view that in the former it came in some way from the sexual apparatus, through the uterus, out of the tubes and into the peritoneal cavity. In the male, tuberculosis of the genital organs proceeded from the prostate to the bladder, kidney, etc., while in women the commencing disease was almost always pelvic in its situation. The difficulties of diagnosis in connection with the disease were dwelt upon by several of the speakers, but there was a very general agreement as to the advantages that followed treatment by laparotomy in suitable cases, as compared with the method of expectancy.

999. *Neve on the Diagnosis of Enteric Fever.*—There is a remarkable tendency shown in the later discussions on typhoid fever to question the accuracy of the diagnosis in many of the cases of continued fever which receive this designation; and there can be but little question that it is not infrequently too hastily assumed that patients are the subjects of the disease, in whom the obscurity of symptoms, and groups of symptoms, occasions a difficulty in arriving at an exact determination of the lesions which give rise to them. Unquestionably, many deaths are put down to this cause which would not be so recorded if the full pathological data could be ascertained; and it is the conviction that this is so that affords so strong a stimulus in promoting the exhaustive inquiries that are now being made into the difficulties and dangers that surround the diagnosis of typhoid. Dr. Neve's paper in the American journal deals with the subject by pointing out the divergencies from the normal course, which are often met with by the physician when called upon to give his attention to sporadic cases of fever. When it occurs in an epidemic, or endemic form, there are not the same difficulties to be overcome; but even in these circumstances there is reason for believing that errors are by no means unlikely to be committed. The principal disturbing incidents, as classified by Dr. Neve, include an unusual temperature course, absence of the usual symptoms and signs associated with the disease in its typical manifestations, the addition of new unusual symptoms and signs, and combinations of the various conditions here specified. Cases illustrating these divergencies are quoted in detail, and in commenting on the lessons taught by them in the abstract, our author suggests that the larger amount of attention given in recent years to recording the details of disease, and the observation of minutiæ, may possibly have promoted a tendency to neglect the instruction that is to be derived from a due consideration of all that goes to constitute the temperament of the individual; and yet the clinical value of such information as is of a purely personal character, cannot be over-estimated, nor the influence that is exerted over the course of disease by characteristics of history, facies, and manner. In this matter, the older physicians were probably more correct than their later brethren, and the tendency of modern times to rest on details might well be tempered by a willingness to give increased importance to the general surroundings of the pathological state. One important aid to the diagnosis of enteric fever, as Dr. Neve remarks, is, undoubtedly, the recollection that the strain of a general blood-poison may be felt, not in the usual seat of election, but in the weakest part of the organism. Thus, he says, in a patient of neurotic disposition, the nerve-vitality defences may be broken down, and a large proportion of the inundating force of the typhoid poison may over-run the brain and spinal cord, and the weakest parts of these will succumb. Sometimes the intellectual centres will be most affected; at other times the stress will be felt most by the motor, the sensory or heat-regulating portions of the cerebro-spinal system; while, in patients with different predispositions, the force of the attack may expend itself on gastro-intestinal, hepatic, respiratory, renal, or integumentary systems, thus giving rise to the varying trains of symptoms which characterise the divergent forms of typhoid fever. C. H. Wade.

1000. *Vaughan on the Chemical Study of the Summer Diarrhœas of Infancy.*—The author has long maintained that the micro-organisms which produce the catarrhal or mucous diarrhœas of infancy are merely putrefactive, or saprophytic, in character, and that they prove harmful by forming chemical poisons. Booker, Escherich, and other able bacteriologists, have made a careful study of the bacteria found in the intestines and stools in these diseases, and all agree that no specific organism is found. From a study of the researches of others, and from his own investigations, Vaughan draws conclusions which he formulates in the following propositions:—(1) There are many germs, any one of which, when introduced into the intestines of the infant, under certain favourable conditions, may produce diarrhœa. (2) Many of these germs are, probably, truly saprophytic. (3) The only digestive secretion which is known to have any decided germicidal effect is the gastric juice; therefore, if the secretion be impaired, there is at least the possibility that the living germ will pass on to the intestine, will there multiply, and will, if it be capable of so doing, elaborate a chemical poison which may be absorbed. The chief reason why the breast-fed child has a better chance for life than the one fed upon cow's milk, lies in the fact that the former gets its food-germ free; but a second reason is to be found in the larger amount of acid required to neutralize the cow's milk, as has been pointed out by Escherich. The gastric juice is the physiological guard against infection by way of the intestines. (4) Any germ which is capable of growing and producing an absorbable poison in the intestine is a pathogenic germ. (5) The proper classification of germs, in regard to their relation to disease, cannot be made from their morphology alone, but must depend largely on the products of their growth. If these deductions be trne, we will try to avoid the introduction into the alimentary canal, not only of the so-called specific pathogenic germs, but of all toxicogenic micro-organisms.

1001. *Talamon on Appendicitis and Perityphlitis.*—Dr. Talamon, in this paper, insists upon the distinction between the clinical aspects of appendicitis, properly so called, and the peritoneal inflammation, local or general, which often results therefrom. He recognises four forms of appendicitis:—(1) Acute perforating appendicitis; (2) sub-acute appendicitis with slowly occurring perforation; (3) simple appendicitis with colic; (4) relapsing appendicitis. This classification is purely clinical. It has been objected that there is a needless multiplication of the forms, but this is not so. The first two forms are well recognised. As to the third form, simple appendicitis with colic, it is necessary to recognise this form, since all cases do not perforate. Even in acute perforating cases, the stage of perforation is preceded by a period in which the symptoms are colic, constipation, vomiting, &c. These phases, Dr. Talamon proposes to call appendicular colic, because the symptoms seem to be explicable by the same mechanism as the symptoms of nephritic or hepatic colic, the rapid engagement of a foreign body in a muscular canal. If we do not admit this mechanism, how are we to explain the phenomena? This cannot be attributed to perforation, even in acute cases, for if we question the patient carefully we always get a history of more or less severe colicky pains preceding the violent pain, announcing the rupture of the appendix into the peritoneum. We must, therefore, admit simple appendicitis with colic as a separate form clinically distinguishable, and while it is the least grave form, it is, at the same time, a premonitory phase of the form terminating in perforation. Is the distinction between this simple appendicitis, and the perforating form, whether acute or sub-acute, capable of being made at the bedside? Two questions are really involved. (1) Can we predict that an appendicitis will perforate? (2) Can we recognise that an appendicitis has perforated? In answer to the first question, Dr. Talamon considers it impossible to say whether an appendicitis will or will not perforate. The symptoms are the same in both cases at the onset. As to the second question, it is of course, from the point of view of surgical interference, very important to make a diagnosis at the earliest possible moment. Can this diagnosis be made? In some cases it is easily made, in others with the greatest difficulty. In acute perforating appendicitis, when occurring in a subject previously healthy, whose peritoneum is sound and free from adhesions, it is not difficult to recognise perforation. A sudden pain in the right iliac fossa, rapidly followed by general abdominal pains, by nausea and vomiting, with cold extremities and signs of collapse, are sufficiently characteristic symptoms. The diagnosis is less easy in the subacute forms, and in relapsing cases. Here perforation does not occur in a healthy peritoneum; it takes place in the midst of adhesions which have gradually formed around the appendix. The course of the ulceration is slower, and is preceded by symptoms of subacute inflammation of the walls of the appendix. In point of fact, subacute appendicitis, and relapsing appendicitis, include several anatomical varieties. In some cases the cavity is dilated, and the walls are thickened and adherent to the parts about. In others, little collections of pus are disseminated in the walls of the appendix. In other cases, again, the cavity is dilated, and contains inspissated mucus or pus; the walls are inflamed and the inflammation has gradually invaded the serous coat, constituting a localised peritonitis. It is not possible, however, by the symptoms, to diagnose with certainty these different conditions, and to determine how far the symptoms point to a parietal inflammation, or to paricœcal inflammation. If we are able to feel a fluctuating mass in the right iliac region, this will favour the diagnosis of perityphlitis, but it is not always easy to make sure. In sub-acute appendicitis, the paralysed cœcum, filled with fecal matter, may give the sensation of a tumour, which must not be mistaken for an abscess. J. B. BALL, M.D.

1002. *Von Jaksch on the Diagnosis and Treatment of Diseases of the Blood.*—The original communication is to be found in the *Prager med. Wochenschr.*, No. 31, ff. 1890. The anæmic diseases are here considered. The first step is to make a simple microscopic examination of the blood; this alone enables us easily to recognise oligocythæmia, oligochromæmia, poikilocytosis, and leukocytosis; also leukæmia and melanæmia. Poikilocytosis is a condition, not a distinct disease; high grades of it occur in every case of advanced anæmia. The next step is to count the cells in a given volume of blood, and to determine the proportion between the red and white corpuscles by the Thoma-Zeiss apparatus, or that of Malassez as modified by Gowers. Thirdly, the hæmoglobin must be estimated by Heischl's or Henocque's apparatus. We may pronounce the case as one of *anæmia*, when there is diminution of the number of red corpuscles, or a diminution of hæmoglobin (oligochromæmia); these two conditions usually coexist. If they do so in equal degree, we have simple anæmia, as after great loss of blood, or after various acute and chronic diseases. Characteristic of *pernicious anæmia* are the extreme progressive oligocythemia (diminution in number of red corpuscles), the diminution of hæmoglobin, and the increased size of the red corpuscles. *Chlorosis* affords nothing characteristic; the number of red corpuscles is apparently normal, but their hæmoglobin is less. Anæmia after severe malaria is recognised by Laveran's plasmodes contained in the red corpuscles, which disintegrate the latter and cause the formation of melanin. The blood-cell perishes here and there, and the melanin is set free, or is taken up by leucocytes. Leucocytosis occurs physiologically towards the end of digestion. It is found temporarily in acute pneumonia, especially in children, but is scarcely to be called characteristic of that disease. In pseudoleukæmia (multiple malignant lymphoma), the latter stages always show oligochromæmia, oligocythæmia, and a pretty high degree of leukocytosis, giving sometimes the aspect of leukæmic blood. *Leukæmia* is at first very difficult to diagnose; the behaviour of the cells towards eosin may be an aid. In typical leukæmia there is an enormous increase of leucocytes, with diminution of red corpuscles, and great diminution of hæmoglobin. In the lienal form large-celled leucocytes predominate, in the lymphatic form the small-celled; while, if the bone-marrow participate, there are found extremely large leucocytes with large nuclei, numerous transitional forms between white and red corpuscles, and many cells with an affinity for eosin. According to the author, there is a form of persistent leukocytosis in children ("anæmia infantum pseudoleukæmica"), which, unlike leukæmia, often ends in recovery; it is characterised by diminution of red corpuscles (in number) and of hæmoglobin, pronounced leukocytosis, enormous splenic enlargement with but slight enlargement of the liver, and occasionally glandular swellings. It is distinguished from leukæmia by the almost total absence of eosin-staining cells, and by the contrast between the liver and spleen. It is distinguished from anæmia in rickets by the much higher degree of leukocytosis and its progression, also by the absence of rachitic signs. E. J. EDWARDES, M.D.

1003. *Hehir on a Case of Anasarca and Albuminuria*—A lady of full habit of body, but apparently in good health, became alarmed at finding her feet swollen in the evening, and that they pitted deeply on pressure. She discovered this by accident, having first learnt that another person was suffering from anasarca of the lower extremities, the result of malarial anæmia. The patient's state was investigated in the usual way with negative results—her heart was normal, there was neither bronchitis nor emphysema, there was no ascites or other sign of cirrhosis of liver, no anæmia, effects of malarial poisoning, or anything to indicate a deterioration of the quantity of the blood. The condition of the kidneys remained to be investigated. But the urine presented only one abnormal character—it contained about one-tenth of albumen. There were no "casts." The usual remedies, chiefly diuretics and saline aperients, were prescribed without any manifest changes. On his third visit, he found the patient sitting writing at table, tightly bound in a corset, and was told that she did the same for several hours every day. It occurred to him that this might be the possible cause of her condition, and he recommended her to refrain from wearing this article of dress *during the day* at least. This was done with the result that both anasarca and albuminuria speedily disappeared, under treatment which previously had proved inefficacious.

1004. *Tancil on a Case of Recovery from Traumatic Tetanus.*—The patient was a coloured lad, aged fourteen, who developed well-marked tetanus, after a wound of the foot inflicted by a nail, the symptoms first manifesting themselves about a month after the accident. When seen on August 18 he complained of pain and stiffness in the jaws, neck and shoulders; the pulse was a little rapid, the temperature about normal, the appetite good, and the bowels regular. During the night of August 21 he suffered intensely. The muscles of the back, trunk, abdomen, and extremities were rigid. The abdomen was retracted, the features distorted, and there were frequent paroxysms of tonic spasms. The jaws were very nearly closed; the patient could not bear to be touched. The entire body, from head to feet, was quite stiff. He was ordered "bromidia," and, later on, tincture of gelsemium; but he continued to suffer very greatly, though with intermissions, for a month, and it was not until September 16 that he had recovered sufficiently to be able to sit up in a chair. The author remarks that in the treatment of these cases the ordinary rules of dosage must be disregarded, and the bromides given in sufficient quantity to determine muscular relaxation. Any lessening of the dose was immediately followed by a return of the spasms and trismus. Another important point in the treatment is quiet and absolute seclusion.

1005. *French on Death from Intra-pulmonary Injection.*—The author recalls that during his term of service as house physician of the Buffalo General Hospital in 1888-89, a large number of cases of phthisis were treated by intra-pulmonary injections. The medicament used was a three-per-cent. solution of beechwood creasote in oil of sweet almonds. Of this about ten minims were injected at a time into a cavity or solidified apex. In most instances the immediate effects were very encouraging. The expectoration usually decreased, and the temperature, after the slight rise caused by the operation, fell, and continued for a time nearly normal. More than fifty such injections had been made with favourable results, when the following accident occurred. The patient was well nourished, and under tonic treatment, and the disease seemed to be in abeyance. Three injections had been made, at intervals of four days, into the left apex, followed in each instance by decreased expectoration and marked diminution of evening temperature. The fourth injection was made by the usual method into the right apex, and the patient immediately after the procedure resumed his duties about the ward. Twenty minutes later he was seized with violent dyspnœa, which gradually became worse. He had formerly suffered from asthma, and the present attack resembled an asthmatic paroxysm. The irritation caused by the drug on the peripheral endings of the vagus seemed to afford a plausible explanation in support of this diagnosis. The usual remedies for asthma were administered, but all failed to give relief. Auscultation was rendered impossible by the violent movements of the sufferer, who succumbed about an hour and a half after the injection. At the autopsy the right lung was found entirely collapsed, and the pleural cavity filled with air. The needle in entering the lung had passed through tissue as thin as ordinary writing paper into an emphysematous space, communicating with a small cavity, which in turn communicated with a bronchus. After the puncture the thinness of the wall prevented it from retracting sufficiently to act as a valve, and the inspired air must have passed almost directly into the pleural cavity. The author adds that cases of pneumothorax have been reported, following intra-pulmonary injection; but all were slight, and ended in recovery. Only one death immediately following this treatment is recorded, and in that case death was due to acute suppurative bronchitis. Had the pneumothorax been diagnosed in his case at the outset of the attack it is possible that surgical interference might have saved the patient. The condition, however, was wholly unexpected, and was not recognised by any of the physicians who examined the case. On the whole it is not surprising that he expresses the opinion that the slight benefits following this method of treatment are secured at too great a risk to make the procedure advisable for general use.

1006. *Woodbury on a Case of Osteo-Malacia.*—Dr. Woodbury showed a case of osteo-malacia before the N.Y. Academy of Medicine. The patient had lived in Switzerland until twenty-six years of age, and had suffered considerably from exposure during the late war. In 1886, when forty-three years of age, he sustained a fracture of the surgical neck of the left humerus, and between that date and May, 1890, he received five other fractures—viz., two of the left humerus, two of the right humerus, and one of the left clavicle. Most of these fractures were caused by very slight falls. During the last three months—but more particularly since the 1st of last August—a tumour had been rapidly growing between the sites of the two fractures of the shaft of the right humerus. Two small tumours were also observed upon the clavicle—one at the point of the fracture, and the other to the inside of it. A specimen, removed from the large tumour with a harpoon, was sent to Dr. J. S. Ely for microscopical examination, and he reported that it contained "polyhedral cells, and occasional large spindle and giant cells." He adds that this "speaks very strongly for sarcoma." A loud murmur, similar to that heard in aortic aneurism, was audible over the large tumour. Dr. Woodbury said that as in cases of tumour of the middle of the spinal cord, osteo-malacia, due to trophic disturbances, is one of the early symptoms, concurrent with disturbances of sensation, he had referred the case to Dr. M. A. Starr, with the hope of learning more about the etiology of this interesting condition. Dr. Starr examined the patient on two or three occasions—the last time only a few days ago—and had reported that there was no central lesion of the cord. The patient had had no pain with the fractures, or upon resetting these bones, and this, together with the fact that there had been no fractures of the lower extremity, seemed to favour the view that the condition was due to a syringo-myelia.

1007. *Epilepsy of Nine Months' Duration following Dental Caries.*—Bakowski reports the following cure of reflex epilepsy:—He was called on the 15th of May, 1889, to attend a young girl of sixteen years whom he found in an epileptiform attack. Notwithstanding varied treatments (bromide of potasium, quinine, arsenic), the attacks continued; they were accompanied by loss of consciousness and were repeated several times a day. At the end of the month of December, 1889, M. Bakowski had his attention attracted to the teeth of his patient. The first upper molar on the right and the first inferior molar on the left were decayed. The patient did not suffer from the above; but immediately before each attack she experienced a sort of a disagreeable sensation (*aura epileptica*). These teeth were removed, and since this time the attacks have no longer returned. This cure has now continued for six months.

Pharmacology and Therapeutics.

RECENT PAPERS.

1008. ENGSTAD, DR.—On Cactus Grandiflorus in Heart Disease. (*Ther. Gaz.*, Sept. 1890, p. 606.)

1009. ILLINGWORTH, DR.—On the Biniodide of Mercury. (*Prov. Med. Journ.*, Nov. 1890.)

1010. SCHMITZ, DR.—On the Treatment of Diabetic Coma. (*Berliner klin. Wochenschrift*, No. 34, 1890.)

1011. POWDER FOR MIGRAINE.

1012. LOCAL ANÆSTHESIA FOR SLIGHT OPERATIONS.

1013. SOME FORMULÆ FOR FLATULENCE. (*Lyon Médicale*, Nov. 9, 1890.)

1014. ANDERSON, DR.—On the Treatment of Acute Phthisis. (*Brit. Med. Jour.*, Nov. 11, 1890.)

1015. A NEW REMEDY FOR PEDICULI PUBIS.

1016. STRALEY, DR.—On a Specific for Poisoning by Rhus Toxidendron. (*Times and Register*, Nov. 22, 1890.)

1017. DUJARDIN-BEAUMETZ, PROF.—On the Treatment of Cancer of the Stomach. (*The Therapeutic Gazette*, November 15, 1890.)

1018. MARTIN, DR. WM.—On Veratrum Viride in Pneumonia. (*Med. News*, November, 1890.)

1019. GOODMAN, DR. H. M.—On a Case of Albuminuria following the Excessive Use of Paraldehyde. (*Amer. Pract. and News*, November 8th, 1890.)

1020. TOURISENNE, DR.—On Hypodermic Injections of Creasote in Respiratory Diseases. (*Rev. de Therap. Méd. Chirurg.*, Nov. 1, 1890.)

1021. HARRINGTON, DR.—On the Value of "Primary Anæsthesia" in Minor Surgical Operations. (*Boston Medical and Surgical Journal*, Nov. 6, 1890.)

1022. MAYS, DR.—On Theine in the Treatment of Neuralgia. (*Philadelphia Med. and Surg. Reporter.*)

1023. PITRES, DR.—On the Treatment of Hysterical Convulsions. (*Bull Med.*, Nov. 9, 1890.)

1024. MONCORVO, DR.—On a Case of Chorea cured by Exalgine. (*Bull Gén. de Thérap.*, Nov. 30, 1890.)

1025. AULDE, DR. J.—On Administration of the Digestive Ferments. (*Therapeutic Gazette*, Nov. 1890.)

1026. SZADEK, DR.—On the Treatment of Syphilis by Intramuscular Injections of Thymol-acetale of Mercury. (*Wiener med. Wochenschright*, 1890, No. 22.)

1027. GULTMANN, DR.—On Salipyrin. (*Berliner klin. Wochenschrift*, 1890, No 37.)

1028. KAST, M.—On Trional and Tetronal. (*Thérap. Monatsh.* November, 1890.)

1029. SCHWITZER, DR. S.—On the Treatment of Diphtheritic Sore Throat by Tobacco. (*La Semaine Médicale*, Dec. 10th, 1890.)

1030. HUCHARD, DR. HENRI.—On the Treatment of Dyspepsia in a Chlorotic Patient. (*Rev. Générale de Clinique et de Therapeutique*, November 26th, 1890.)

ART. 1008. *Engstad on Cactus Grandiflorus in Heart Disease.*—Dr. Engstad states that he has prescribed cactus grandiflorus in cases of heart-disease for the last four years, and prefers it to digitalis in functional disturbances. In cases of weak intermittent heart-action, the fluid extract taken in fifteen-minim doses, three times a day, proves a very valuable remedy. In one case of typhoid pneumonia in a lady, who made a very slow recovery, and had very feeble heart-action, the administration of cactus produced a marked effect, though strychnine and digitalis had been given without success. In all cases of convalescence from typhoid fever, where the heart is weak, it can be given with much benefit. It is almost a specific in angina pectoris, the author having tried it in several cases without meeting with any failure. The dose found to answer best is from eight to ten minims of the fluid extract, or 15 drops of Merck's tincture, three or four times a day.

1009. *Illingworth on the Biniodide of Mercury.*—In the *Provincial Medical Journal* of November, 1890, p. 659, Dr. Illingworth contributes an article on the value of the biniodide of mercury as a therapeutic agent. This salt, in common with other salts of mercury, possesses derivative and germicidal properties, which are enhanced considerably by its solubility in solutions of the iodides of potassium and sodium, because, by the great diffusion and penetrating power of these solvents, every corner of the circulation can be reached by the internal administration of the germicide. It is useful in the following disorders:—

(1) Purely local germ diseases. *Ophthalmia neonatorum* (1 in 3,000), and *contagious conjunctivitis*; *gonorrhœa* (1 in 5,000 to 6,000); *hay asthma* (1 in 2,000); *alopecia* (1 in 500); *scabies* (1 in 400 or 500); *ringworm* (1 in 4 or 5); and *sycosis*.

(2) Purely local septic disorders: *Ozæna* (1 in 3,000 or 4,000); *otorrhœa* (1 in 2,000 or 3,000); *pelvic abscess* (1 in 2,000); and *pyosalpinx* (1 in 2,000 or 3,000).

(3) Surgical and puerperal septicæmia from infective areas.

(4) At the seat of the lodgment, growth, and development of septic germs (1 in 2,000).

Thus, in the mucous membrane of the mouth and throat, in scarlet fever, and diphtheria; and the nose, eyes, and air-passages in measles and whooping-cough, germicidal and anti-fermentative properties of the biniodide have proved of great service in the author's hands, in the treatment of flatulent dyspepsia, cholera infantum, English cholera, and the green stools of infants and young children. The *alterative* or *derivative* uses of this drug are perhaps of even greater importance than the germicidal, because of the constant occurrence of cases of peripheral and periphero-central vascular derangement in general practice. More especially in the shape of inflammatory and chronic congestive affections of serous membranes, meningitis, pericarditis, pleuritis, peritonitis, and neuritis. In serous membranes, as elsewhere, the inflammatory process passes through the stages of congestion, stasis, effusion of inflammatory, and resolution, either sooner or later.

Richard Neale, M.D.

1010. *Schmitz on the Treatment of Diabetic Coma.*—Before treating a diabetic patient who is in a comatose condition, the question has to be decided whether it be a case of cardiac failure or of auto-intoxication (so called acetonæmia). No doubt the excess of sugar in the blood has a destructive effect on the striped muscular fibres all over the body. In the limbs this is evidenced by a want of tone in the muscles, with weakness and sense of fatigue; whilst if the cardiac muscular fibres are seriously affected, threatening symptoms at once make their appearance. Cardiac failure is evidenced by dyspnœa and cyanosis, a small slow pulse which increases in frequency on the slightest exertion, a scarcely perceptible apex-beat, and a weakened first sound. If the heart prove unequal to its task, extremely urgent symptoms come on, the dyspnœa and cyanosis increase, carbonic acid is present in the blood in great excess, the patient becomes somnolent and dies in a comatose condition. This process can run a very acute course, causing sudden death. Rupture of the heart has even been observed. The treatment in these cases consists, of course, in the utmost quietude and rest, easily assimilated nourishment and a moderate amount of alcohol. Excess "in Baccho and in Venere," the administration of modern antipyretics and of potash salts are to be avoided. In sudden attacks of cardiac weakness, the patient must be kept at rest in the horizontal position, and, as stimulants, camphor or strong coffee should be given, or musk subcutaneously. Alcohol should, in Schmitz's opinion, be given with great caution. Even after such an attack has been successfully traversed, absolute rest should be enforced until the first sound has regained its strength. In the other and quite different form of diabetic coma, there is an auto-intoxication, probably, accordingto Schmitz, not acetonæmia. The prodromal symptoms are want of appetite, eructation of ill-smelling gas, fatigue and somnolence, obstinate constipation, dry furred tongue, and foul breath. The attack begins with stupor varied by restlessness, great increase in frequency of pulse and respiration, and rise of temperature. There are frequently colicky pains, and sometimes vomiting of a greenish fluid, this last symptom causing some relief. Death occurs in deep coma, with sometimes tonic or clonic convulsions. The heart and lungs show nothing abnormal. The initial phenomenon seems to be the formation of toxic substances due to decomposition (zersetzungs produkten) in the digestive tract, to which thefirstsymptons are to be ascribed, and these toxic substances are absorbed and pass into the circulation, causing coma and death. The treatment recommended by Schmitz is the rapid emptying of the intestine by means of large doses of castor oil. He has frequently observed this method of treatment to be followed by the evacuation of large masses of black offensive fæces, and rapid disappearance of the dangerous symptoms. He declines to express an opinion as to the nature of these decomposition products.

W. A. FitzGerald, M.D.

1011. *Powder for Migraine.*—The following powder is recommended in *La Médecine Moderne* for the treatment of migraine:—℞ Citrate of caffeine, 1½ grains; phenacetin, 2 grains; sugar of milk, 4 gram.; M. To be made into one powder. This dose may be repeated, if necessary, in the course of two hours.

1012. *Local Anæsthesia for Slight Operations.*—For operations upon small abscesses, opening fistulous tracts, or removing superficial growths, it is recommended that local anæsthesia be secured by a spray of the following solution:—℞ Chloroform, 10 parts; sulphuric ether, 15 parts; menthol, 1 part; M. The anæsthesia which is thus obtained lasts from two to ten minutes.

1013. *Some Formulæ for Flatulence.*—(1) ℞ Naph, thol, 5 grammes (75 gr.); magnesia, 5 grammes (75gr.); wood charcoal, 5 grammes (75gr.); ess. menthæ pip. ♏ii. Divide into 15 powders; one to be taken, in a cachet, at the beginning of meals. (2) *For Flatulence and Constipation.*—℞ Magnesia, sulphur sublim., āā 5 grammes (75gr.). Divideinto 15 cachets. (3) *Flatulence and Diarrhœa.*—(*a*) ℞ Pot. salicylate, 5 grammes (75 gr.). For 15 doses. (β) ℞ Sodii bicarb., ʒss.; cret. præp., gr. xv.; pulv. nuc. vom., gr. iij. For 10 doses. (γ) ℞ Sodii bicarb.; p. rhei, āā gr. xv.; pepsin, gr. viij. For 10 doses. (4) *Flatulence with Gastralgia.*—℞ Morph. hydrochl., gr. iss.; aq. laurocerasi, ♏ 75. One drop to be taken on sugar before each meal.

1014. *Anderson on the Treatment of Acute Phthisis.*—The author advocates a treatment based on the following classical precepts:—(1) Maintain the strength of the patient, and increase his power of resistance; (2) reduce the fever, and combat any complications. Dr. Anderson recommends a diet of milk, broth, and soup, at frequent intervals; every ingestion of food to be followed by a small quantity of rum, whisky, or other alcoholic stimulant. To reduce the temperature, quinine may be given in a daily dose of about gr.xx., either alone or combined with digitalis and opium. The writer also employs iced-water compresses to the abdomen. By the above treatment, he has obtained five cures out of a total of seven cases.

1015. *A New Remedy for Pediculi Pubis.*—An American contemporary recommends the following ointment in the treatment of pediculi pubis:—℞ Acid. salicylici, 3 parts; acid. acetici arom., 25 parts; spt vini rect., 72 parts.

1016. *Straley on a Specific for Poisoning by Rhus Toxidendron.*—The author claims to have had a good deal of experience of cases of poisoning by rhus toxidendron, and after having exhausted his resources in the endeavour to find an efficient antidote, he ultimately lighted upon a strong decoction of chestnut-leaves (*Castanea Fagus*), bathing the inflamed parts every three or four hours. In the first case in which he tried it, within twenty-four hours all the distressing symptoms had subsided, and the patient was discharged cured. Since August, 1888, he has prescribed the castanea treatment for all cases of rhus and ivy poisoning, and in all stages of the inflammation, with the invariable result in every case of perfect relief from all symptoms in from twenty-four to seventy-two hours.

1017. *Dujardin-Beaumetz on the Treatment of Cancer of the Stomach.* — After describing the difficulties which arise in many cases of gastric cancer to prevent an accurate diagnosis of the disease from being arrived at, the author gives it as a result of his own researches that the diminished excretion of urea observed in cases of cancer is not of any absolute value as a sign of the affection. It is only a complementary indication of failing nutrition, and occurs as a consequence of all pathological states attended with profound modification of the nutritive processes. It, therefore, follows that the law of Romursläre, to the effect, that when the daily excretion of urea remains during several days at a point exceeding twelve grammes, then malignant tumour is to be excluded, is not generally applicable. In fact, Prof. Dujardin-Beaumetz rejects every simple symptom as absolutely diagnostic, and insists that the determination of cancer of the stomach can only be derived from a full and careful consideration of all the phenomena, symptomatic and clinical, which the patient presents. The indications for treatment are, antisepsis of the stomach, relief of pain, and direction of diet. The first is met by use of a mixture of salicylate of bismuth, with salol and sodium bicarbonate, of each five grains, to be taken before meals, in capsules. For relief of pain he recommends the hypodermic injection of a solution of sulphate or hydrochlorate of morphine, with neutral sulphate of atropine, in sterilized water. The diet, he insists, should be completely vegetarian, which, in his opinion, has many advantages over a mixed form of food.

1018. *Martin on Veratrum Viride in Pneumonia.*— Summarising the effects obtained in pneumonia by the administration of veratrum viride the author concludes that :—(1) The administration of veratrum viride is the preferable method of treating pneumonia, and that the drug is best given in the form of a tincture (Norwood's). (2) If the dose is at first small and gradually increased it is a safe medicament. (3) It should be given early, and, if possible, in the first stage, though it is also of use in the second stage. (4) If used in cases with broken-down constitutions, as in inebriates, it should be administered cautiously. In such cases there is immediate danger from the depression, and the toxic effects should not be produced.

1019. *Goodman on a Case of Albuminuria following the Excessive Use of Paraldehyde.*—In May, 1887, Dr. Goodman was called to see Mrs. X, aged fifty-five. She had been considerably worried over family troubles, and, being unable to sleep, had two months previously consulted a homœopath in her neighbourhood who had prescribed elixir of paraldehyde. She had continued taking the drug in gradually increasing doses, and when he saw her she had been taking from sixteen to eighteen ounces in the twenty-four hours. She was extremely morose, irritable, and apprehensive. The tongue was dry and coated with a brown fur, breath foul, lips cracked, and skin dry and parched. The teeth were discoloured and the hair had become very brittle. Her eyesight was very much affected; she was troubled with diplopia, and could not see the clock across the room. Her appetite was gone and she was much emaciated. The examination of the urine made on the second day showed one-fourth of one per cent. of albumen, diminished urea, and absence of casts. Subsequent examination, made at intervals of every three days, continued to show the same condition for six weeks, after which it gradually disappeared, and at the end of three months the urine had become normal. Her general condition improved and she entirely regained her health. Although he had made examinations of her urine every two months since then, he had never detected even a trace of albumen. Knowing her health to have been good, and having had occasion to examine her urine in 1885 and 1886, and also early in the year 1887, before she took the paraldehyde, he is satisfied that the condition of the kidneys was due directly to this cause, and had the drug not been discontinued, it would possibly have terminated in a confirmed albuminuria.

1020. *Tourisenne on Hypodermic Injections of Creasote in Respiratory Diseases.*—Although some benefit was derived from the internal use of creasote in bronchitis, cough, etc., it appeared to the writer that much better results ought to be obtained if more of the drug could be introduced than is possible by the digestive tract. For this purpose an oily hypodermic solution was made as follows :—℞ Ol. amygdali, 120 parts; creasote, 8 parts. Of this solution, it was found possible to inject as much as 20—40 grammes. The injections, which were not painful, unless the materials were impure, were made into the subcutaneous fat of the lumbar region, taking care to distribute the solution during the operation by gently stroking with the finger. It was found that, under this treatment, râles, expectoration, and cough improved almost at once, and in many cases eventually disappeared.

1021. *Harrington on the Value of "Primary Anæsthesia" in Minor Surgical Operations.* — Dr. Harrington has operated on several hundred patients, during the last three years, making use of the so-called primary anæsthesia, obtained by using ether in the following manner :—The patient may be allowed to inhale the ether in the erect position. Women and children, especially, are less alarmed if allowed to inhale the ether in the sitting posture. It is not desirable in the case of strong men, unless retained by a strap. An ounce or more of ether is poured on a sponge or towel. This is given to the patient with directions to breathe rapidly, and deeply. It is important to teach the patients how to breathe, before applying the ether. The rapid and moderately deep breath is the most efficacious. Dr. Harrington tells them to breathe as the dog pants. The sponge should be held at a short distance from the face, and should not cause coughing. After a dozen or more rapid breaths, he asks the patient if he is ready. The reply is usually "No." This question is constantly repeated until the patient says "Yes," or until there is no response. If the operation is merely a single incision, the ether is at once removed. If more time is required, the ether should be kept applied. The duration of insensibility to pain is from twenty seconds upwards. Vomiting rarely occurs. Patients are generally pleased with the action of the ether.

1022. *Mays on Theine in the Treatment of Neuralgia.*—The above journal contains a short note on the use of theine in neuralgia. Every now and then cases are reported which have been cured by the hypodermic use of the drug in question. About four years ago, Dr. Thomas J. Mays first called attention to the local anæsthetic action of the alkaloid. As the result of his investigations, he concluded that its physiological action is not identical with that of caffeine, while its analgesic properties are more prompt and enduring than those of morphia or other agents commonly used to relieve pain. Any safe and reliable remedy in the treatment of neuralgia would be of the utmost value to the physician, so that a full investigation of the claims thus advanced is desirable.

1023. *Pitres on the Treatment of Hysterical Convulsions.*—Leave the patient as much as possible to herself, avoiding physical restraint. Pressure over the epigastric or ovarian regions will often bring an attack to a prompt termination. Another effectual method is to apply gradual pressure over the eyeballs, maintaining it for several minutes. This usually throws the patient into the hypnotic condition from which she may be left to recover spontaneously, or may be abruptly awakened in the usual way. When electrical appliances are available, an interrupted and reversed current, applied with one pole on the forehead and the other on the abdomen or thigh, will soon bring round the patient. Most patients of this kind have one or more of what are termed "spasmogenic zones," tender, excitable spots, and pressure on or irritation of which will determine an attack. The author recommends the application of ice-bags or ether-spray to these zones. Lastly, the author speaks highly of the benefits to be derived from the use of coloured spectacles. The effect of colour seems to present some analogy with that of pressure, on hysterical subjects. Some colours precipitate an attack, while others provoke an agreeable sensation. He quotes the case of a girl on whom spectacles with red glasses produced striking effects both in checking attacks and in preventing their recurrence.

1024. *Moncorvo on a Case of Chorea cured by Exalgine.*—Having obtained brilliant success in the treatment of chorea in children by means of antipyrine, the author was tempted to use methylacteanilide (exalgine), a drug resembling antipyrine in its action, in the same class of cases. He was tempted to do this from the fact that, although antipyrine was perfectly successful, yet very large doses of the drug had to be used, and it was very desirable to find another remedy which was successful in smaller doses. Trials with the drug had proved that children bear very well daily doses of five grains, and that these doses never produced cyanosis or other untoward symptoms. The patient whose case is reported was a typical victim of paralytic chorea, in whom the movements were almost constantly present. Treatment was commenced by doses of three grains in the day. After five days, the choreic movements were distinctly less, and scarcely occurred at all during sleep. The dose was then increased to five grains daily, and in a fortnight the patient was pronounced practically cured, being able to speak and write perfectly plainly, and not being troubled with any choreic movements. The treatment was continued a few days longer, and supplemented by doses of syr. ferri. iodidi. No return of symptoms took place. The above is of course only an isolated case of cure, but the success would seem to show that the treatment is worthy of a more extended trial. The author states, moreover, that the quantity of drug required was only one-fourteenth of the amount of antipyrine, which would have probably produced a similar effect. It is to be hoped that the results of a more extended experience will be recorded.

1025. *Aulde on Administration of the Digestive Ferments.*—In this communication Dr. Aulde calls attention to the value of the digestive ferments, when properly used, and also points out some of the causes of failure with these remedies. If the action of pepsin in the stomach could be exercised in the same way as it would be in the test-tube, then the problem would be a simple one; but the complications which are presented by the gastro-intestinal tract, contrast strongly with that precision which can be adopted when making investigations by means of the test-tube. Some of these difficulties are enumerated as follows:—(1) *The condition of the alimentary tract* may be such that pepsin alone will be inefficient. Physicians are well aware that pepsin is active only in presence of free hydrochloric acid. Now, a large part of our population live chiefly on a diet composed of carbohydrates, and it is a known fact that the presence of excess of these in the stomach will specially favour lactic and acetic fermentation. These latter processes, too, will in their turn arrest the formation of hydrochloric acid. But the presence of hydrochloric acid is an important factor in controlling acid fermentation, so a vicious circle is thus established Patients of this type are more or less constant sufferers from acidity and fermentation of food, which seriously interferes with intestinal digestion, and it is not infrequently to this class of cases that the physician prescribes pancreatin. Dr. Aulde points out, however, that the more rational plan of treatment would be to forbid all starchy foods and sweets, substituting a meat diet, with the judicious use of pepsin and a little hydrochloric acid. This treatment has the advantage of being based on sound physiological teaching. Another way would be to forbid starchy foods as before, and to give large doses (gr. xxx.—lx.) of sodium bicarbonate, well diluted, about two hours after a meal. Among the *extraneous causes of failure*, are mentioned derangements of the liver, and an impoverished state of the blood, such as is associated with chlorosis or anæmia. Under such conditions, although the peptonising process may be carried out efficiently, the system is incapable of dealing with the peptones and other products after their absorption; and these remaining unaltered in the blood, will be not only useless for nutrition, but by their toxic effect will tend to still further emphasize the original complaint. The *mode of administration* must also be considered. Here it is asserted that great laxity exists, and the writer gives some instances of favourite prescriptions which, from failure to remember the conditions under which pepsin can alone remain active, are quite valueless for the amount of ferment they contain. One of these is the following:—℞ Pepsin, gr. xxx.; sodii bicarb. ʒij.; glycerini, ℥ss.; tinct. cinchonæ co., ad. ℥iij. *Sig.:* a teaspoonful in water after meals. Here will be observed three errors:—(1) The pepsin is combined with an alkali; (2) it is subjected to the action of tannin from the cinchona; (3) it is exposed to the action of the alcohol of the tincture. All these three causes will render the pepsin quite inert, and no digestive action is to be expected from such a mixture. Again, pepsin is not infrequently combined with pancreatin. Such a mixture might, in the dry state, be an efficient one, but in the liquid form there is always a mutual destruction of the two ferments, which renders the mixture practically inert as a digestive agent. The variations in quality of the specimens of pepsin on the market seem also to be considerable, and, according to a table published, it would appear that some of them have very little proteolytic power. Clearly, then, the prescriber of pepsin would do well to specify the kind of pepsin he wishes supplied.

1026. *On the Treatment of Syphilis by Intramuscular Injections of Thymol-acetate of Mercury.*—The author has used intra-muscular injections of thymol-acetate of mercury (Merck) in cases of syphilis, both recent and chronic. The formula he has employed is as follows:—℞ Thymol-acetate of mercury, 1·5 grammes; mucilage, 0·5 grammes; aq. destill., 20 c.c. The injections were made deep into the muscular tissue, and repeated every three or four days. Eighteen cases were treated in all by a hundred and twelve injections. Treatment lasted over forty-two days; the shortest duration was twelve days. Generally after two or three injections, the exanthem became paler, and papular eruptions began to disappear; after the fourth injection ulcers took on a healthy appearance. As a rule, muscular eruptions of recent date required from four to six injections; palpular rashes did not disappear completely till after 6—8 injections. Under this treatment, obstinate squamous, or pastular rashes, and even ulcers of specific origin, disappeared with much greater rapidity than under other mercurial treatment. The author obtained a particularly favourable result in two cases of syphilitic laryngitis, with complete aphonia; all symptoms ceased immediately after the first injections. These intramuscular injections were never followed by inflammatory reaction at the seat of puncture; in no case was either induration or abscess produced. As to stomatitis, this was seldom observed, and, when it occurred, was quite unimportant, yielding at once to simple treatment.

1027. *Gultmann on Salipyrin.*—Salipyrin is a combination of salicytic acid with antipyrin. It is prepared by adding salicylate of soda to a weak, hot solution of antipyrin. On cooling, the solution yields crystals of the substances, which possesses the formula $C, H_{20}, NO. C_7 H_6 O_3$. Salipyrine is a white powder with a slightly sweet taste, and odourless; it is but feebly soluble in water, but freely so in alcohol. The author has used the drug for a great number of patients, and finds that the dose from ʒi. to ʒiss., in twenty-four hours. It should be given in divided doses, gr.xxx. being first given, followed by doses of gr.xv. There is generally obtained in this manner a fall in temperature of 1½° C. to 2½° C. The maximum effect is observed after three or four hours, and is accompanied by more or less profuse sweating, but never with rigours. No ill effects have been observed to follow the use of the drug, and only in one case was a slight erythema produced. When used in rheumatism, a decided analgesic effect was produced, as well as a fall in temperature. The author finds that, like antipyrin, the action is more manifest in intermittent than in continued fevers.

1028. *Kast on Trional and Tetronal.*—The researches on the action of sulphonal, led the author to study the alterations in physiological action of certain bodies according to the addition or the grouping of their constituents. He came to the conclusion that the (So_2) group did not in any way modify the action of the compound, but that the therapeutic activity lay in the ethyl (C_2H_5) group; and, further, that the amount of hypnotic action was proportional to the number of ethyl groups contained. Thus, trional and tetronal which correspond to sulphonal, in which either one or both of the methyl groups are replaced by ethyl, have a more powerful hypnotic action than sulphonal; and the author found that these succeeded in producing sleep in cases which had resisted all other treatment. The dose employed was from gr. 45—60 in the day. It would seem that trional and tetronal are likely to be a useful addition to our already large list of hypnotics.

1029. *Schwitzer on the Treatment of Diphtheritic Sore Throat by Tobacco.* — Dr. Schwitzer (Neuhaeusel) having noticed that tobacco-workers, specially those who chew tobacco, are seldom the victims of infectious throat affections, conceived the idea of employing tobacco in diptheritic sore throat. The solution used is obtained by extracting one part of tobacco juice, such as is obtained from the reservoir of a pipe, with twenty parts of alcohol. The resulting liquid, after filtering, is of red-brown colour, and thus is painted on the affected parts. These applications were always well borne even in young children. They were not even disagreeable to the patients, and never produced symptoms of tobacco poisoning. The therapeutic action was highly satisfactory, and showed itself by a rapid subsidence of the fever. In adults Dr. Schwitzer employs also a gargle consisting of a one per cent. infusion of tobacco leaves in boiling water, and this gargle he considers superior to all others used for diphtheria. The treatment has met with complete success in sixty cases, but seven others were not benefited, four succumbing to the diphtheria itself, and three to consecutive affections

1030. *Huchard on the Treatment of Dyspepsia in a Chlorotic Patient.*—It is often a very difficult matter to treat what is, perhaps, the most troublesome symptom of chlorosis, viz., the inability to digest food. Dr. Huchard commences his paper by describing an ideal case of this nature. His patient has become dyspeptic as a result of chlorosis. Preparations of iron, quinine wine, a generous meat diet, have only aggravated the dyspeptic symptoms, and the anæmia is increasing. What is to be done, and why does this treatment fail? In order to succeed in treatment, the pathological condition must be correctly understood. It is now known that the dyspepsia in chlorotic patients is almost invariably accompanied by a diminished production of hydrochloric acid in the stomach; this acid being replaced by others, such as lactic and butyric acids, results of fermentative changes. The patient is therefore quite unable to assimilate the meat diet to which she is so often submitted, and it is thus scarcely to be wondered at that her symptoms are aggravated by this treatment. The aim of our treatment, then, should be as follows:—To supply the gastric juice with the necessary amount of hydrochloric acid, and prescribe a diet suitable to this condition. We must forbid strong wines, beer, and alcoholic drinks generally. All irregularities in meals, evening parties, prolonged exercises, and long walks must be carefully guarded against. The diet should consist largely of milk foods, white or vegetable soups, white fish, toast, with little butcher's meat. Exercise must be taken in great moderation, and always short of fatigue. As regards medicinal treatment, it is well to give small doses of alkalies before meals, for which a convenient prescription is the following:—℞ Sodii bicarb., carbonis ligni, magnesiæ naphthol, āā. ʒi. A twentieth part to be taken in wafer paper. The naphthol is introduced to favour intestinal antisepsis, and to check fermentation. About half an hour after meals, use dilute hydrochloric acid draughts, made by adding ♏x.—♏xv. of dilute HCl. to half a tumblerful of water, adding a little sugar if desired, or some syrup of lemon. Besides the above direct treatment, we must carefully avoid constipation by the employment of powders such as the following :—℞ Sulphur sublim. magnesiæ, āā. gr. viij. To be taken two or three times a week, adding, if necessary, a little powdered rhubarb. It is also well to keep the skin acting by employing dry friction or massage to the limbs and abdomen. Notwithstanding the above-indicated treatment, there are some cases in which little improvement is obtained, and here one must seek for a neurotic element, which, if found, must be treated by moral advice, with regular cold or tepid douching, change of air, &c. As regards the use of iron, it must be borne in mind that while dyspepsia is present, this remedy is worse than useless; no preparation of iron will be of use till all dyspeptic symptoms have disappeared as a result of the treatment above indicated. When this has taken place, it is well to give iron before, and hydro-chloric acid after meals. The preparations to be preferred are the proto-salts, or Blaud's pill. The author concludes with the warning, "Be careful not to treat the chlorosis, but the chlorotic patient as a whole."

Gynæcology and Obstetrics.

RECENT PAPERS.

1031. Price, Dr. Joseph. — On Major Pelvic Troubles traceable to Minor Gynæcology. (*Philadelphia Med. and Surg. Reporter*, Oct. 18, 1890.)

1032. Kinkead, Dr.—On Ruptured Perinæum. (*Dublin Jour. of Med. Science*, Oct. 1890, p. 299.)

1033. Macan, Mr.—On a Case of Successful Cæsarian Section. (*Dublin Jour. of Med. Science*, Nov. 1890, p. 361.)

1034. The Changes following Extirpation of the Uterus. (*Am. Jour. of Obstetrics.*)

1035. Lapthorn Smith, Dr.—On the Absorption of Drugs from the Vagina. (*Canadian Medical Practitioner.*)

1036. Playfair, Dr. W. S.—On Chloral for Rigid Cervix. (*The Canadian Practitioner.*)

1037. Orthmann, Dr.—On Five Cases of Kraurosis Vulvæ. (*Zeitschrift für Geburts.*, Band xix., Heft 2.)

1038. Spaeth and Hofmokl, Drs.—On Injuries during Coitus. (*Zeitsch. für Geburt.*, Vol. xix., No. 2, and *Internat. klin. Rundshan*, September 28th, 1890.)

Art. 1031. *Price on Major Pelvic Troubles to Minor Gynæcology.* — The writer maintains that manifold major surgical affections arise from treatment recognized as orthodox by minor gynæcology. He raises the question whether much of the treatment held to be necessary previous to real surgical interference, should not be altogether abandoned. From his own experience he does not hesitate to put minor gynæcology in casual relationship with a vast amount of the major pelvic surgery that is necessarily required. He first instances the Emmet cervical operation. It should be set down that where there is pre-existing pelvic disease, even though slight, no cervical operation ought to be tried unless absolutely required by the condition of the patient. Another operation indiscriminately performed is forcible dilatation of the cervix. It is often undertaken for the relief of dysmenorrhœa; but the fact is that, in many cases where stenosis would be diagnosticated, there is no difficulty whatever attending the menstrual flux. If there be co-existing pelvic inflammation, dilatation will increase it, or, if absent, that condition may be actually induced. Rapid dilatation of the cervix is a distinct traumatism, and is apt to be as dangerous as any other form of traumatism, a fact abundantly proved by operative pelvic work. Judging simply from its remoter effects, the writer holds that rapid dilatation is a dangerous operation, and results oftener in subsequent harm than in lasting good. The inconsiderate use of the uterine sound is generally acknowledged to be the cause of much inflammatory pelvic trouble. Its use should be restricted as far as possible to skilled hands. The indiscriminate use of the sound and electrode is the most serious mechanical objection to the use of electricity. The curette is equally objectionable, and, combined with dilatation, has placed to its credit a long series of major operations. Another class of cases is where a long course of intra-uterine applications has been administered. For a woman to have undergone treatment with the routine caustics, and to have escaped pelvic inflammatory trouble, is little short of a miracle.

1032. *Kinkead on Ruptured Perinæum.*—The author records three cases of ruptured perinæum which occurred in his practice, in spite of every caution he took to prevent the mishap; and he strongly urges that these cases should be attended to at once, and not allowed to heal by chance. The author states that the neglect to repair arises from two causes :—(1) The notion that if the laceration is not extensive, union may take place by means of rest, position, and cleanliness; and if extensive, so that the rectum is involved, it is useless to suture the wound, as union is not likely to take place. (2) The idea that laceration of the perinæum is an indication of incompetence or neglect, and likely to prejudice the patient against the practitioner. Dr. Kinkead describes three cases, in which he shows that the rupture was extensive in each case, in spite of great caution, and perfect union occurred after suturing the wound with deep sutures, though in one case the rent extended into the anus, and for an inch up the rectum. Whether it be that higher education and social progress produce larger fœtal heads, or render the perinæum more friable, the author is unable to say, but he states that he finds it more impossible to preserve the perinæum intact than he did when he began practice.

1033. *Macan on a Case of Successful Cæsarian Section.*—Mr. Arthur Macan publishes a case of Cæsarian section which he performed at the Rotunda Hospital, and adds that it is the only successful recorded case in Ireland. The patient was aged twenty, and only measured 3ft. 7½in. high; she was admitted on July 9th, 1889, about two weeks before her confinement was due. The author decided to perform Cæsarian section, as soon as labour had advanced towards the end of the first stage, just when the os is nearly fully dilated and the membranes unruptured. The reason for waiting so long is, in order that the lochia may be able to drain away through the cervix during the puerperal state. At 8·30 a.m. on August 5th, the os had commenced dilating, and the vagina was well disinfected with 1-in-5000 solution of corrosive sublimate. At 10·30 a.m. an incision was made in the abdominal wall from the umbilicus, to within two inches of the pubes, but this had to be extended upwards, to enable the uterus to be turned out. A strong elastic ligature was now put twice round the cervix of the uterus, drawn tight, and then fastened with large compression forceps. The uterine wall was then freely incised in the middle line between the fundus and the cervix. When the membranes came into view they were at once ruptured, and the child extracted without difficulty; but, though the time from the application of the elastic ligature to the extraction of the child could scarcely have been two minutes, the child was in a state of blue asphyxia. The cord was at once tied and cut, and the child soon cried lustily after applying artificial respiration. Its weight was 7¼lbs. After peeling off the placenta and membranes, and disinfecting the interior of the uterus, the edges of the uterine wound were carefully brought together by silk sutures, introduced one centimètre from the edge of the uterine wound, through the muscle and decidua, emerging through the latter about one-half or three-quarters of a centimètre from edge of wound, and continued through the opposite side of the wound in like manner. Sixteen stitches were thus passed and tied tightly, and the elastic ligature was then removed. The uterus contracted badly, and some oozing of blood took place, which was stopped by passing an additional suture, and applying hot sponges to the uterus and kneading. The abdominal walls were then closed by sixteen stitches, and the usual Lister's dressings were applied. The patient made a good recovery, and union was perfect by the twelfth day.

Richard Neale, M.D.

1034. *The Changes following Extirpation of the Uterus.*—The menses, without exception, cease entirely. No vicarious discharges occur. The menstrual molimina occur in all cases early after operation. No considerable influence is observed on the remaining genitals. The operation has eventually a favourable influence on the general health of the patient. The sexual appetite is but little influenced, nor does the disposition of the woman change. Ovariotomy (double) makes a vastly more profound impression upon the physical and mental state than does extirpation of the uterus.

1035. *Lapthorn Smith on the Absorption of Drugs from the Vagina.*—The author calls attention to the absorption of drugs from the vagina. He has noted this when using iodine, iodoform, and corrosive sublimate. With the latter, the *post-partum* introduction of a pint of 1 to 1,000 solution was followed by sudden diarrhœa, collapse, and suppression of urine. He inclines to the belief that this absorption takes place even when the membrane is unbroken. He says:—"I have now been employing the local administration of bichloride of mercury in doses of one-tenth of a grain every three or four days, on a boro-glyceride tampon, during the last two years, about five hundred times in about fifty cases of vaginitis, endometritis, salpingitis, ovaritis, and pelvic peritonitis, and I feel sure the duration of treatment, before relief has been obtained, has been very much less than was the case before I adopted this method. Exactly how much of my success is due to the bichloride alone, I am unable to say, for the simple reason that, at one time or another of the treatment, in every case, I employed other remedies and measures in addition to it. One of my reasons for attaching so much value to the bichloride of mercury employed in this way is, that nearly every one of the diseases above mentioned is due more or less directly to septic absorption, and that the more or less constant production of septic matter is necessary to keep up the disease."

1036. *Playfair on Chloral for Rigid Cervix.*—About sixteen years ago Dr. W. S. Playfair first recommended chloral for rigidity of the cervix in labour. At the recent meeting of the British Medical Association, Dr. Playfair referred to his experience of such treatment, which had been uniformly satisfactory. He said:—"Under the use of this agent, the pains become longer, steadier, and more efficient, and the patient falls into a somnolent condition, dozing quietly between the pains, which are not lessened or annulled, as is so often the case when chloroform is used. More important than all, the wild stage of excitement which is so frequent in cases of rigid cervix is calmed, to the relief, not only of the patient, but of the practitioner. It is not necessary to administer large doses: fifteen grains, repeated in twenty minutes, by either the mouth or the rectum, produce an effect that usually lasts for several hours. Possibly a third dose may be required, but never more. Another good effect of this drug is that when the exulsive stage is reached, the patient being already in a state of partial anæsthesia, much smaller quantities of an anæsthetic are required than would otherwise be the case." The writer has used this drug, as recommended by Dr. Playfair, for the last fifteen years, with the most satisfactory results.

1037. *Orthmann on Five Cases of Kraurosis Vulvæ.*—The author reports five cases of this peculiar form of atrophy of the pudenda, which was first described by Breisky, in a paper based upon an analysis of twelve cases. The latter describes the condition as an atrophy of the skin covering the external genitals, in consequence of which even the introduction of the finger into the vagina causes fissures in the soft parts. The introitus may become so narrowed as to interfere with coitus and parturition. Microscopical examination of sections of the affected skin show that there are retrograde changes in the upper layers of the corium, causing sclerosis of the papillæ, the rete being so thin in many places that the horny epidermis rests directly upon the papillæ. Sweat and sebaceous glands are absent. Regarding the etiology of this peculiar affection, nothing is known. Treatment is useless. Fleischmann later reported eight cases, confirming Breisky's observations, and Janovsky six, the latter believing that long-standing blenorrhœa was a prominent etiological factor. Orthmann's careful studies led him to the same conclusion as Breisky, that the cause of this affection is unknown. In his cases there was excessive itching and burning, while in those of other observers this symptom was rarely present. All the cases presented the characteristic appearances described by Breisky: smoothness, dryness and cicatrization of the skin, atrophy of the labia, and stenosis of the introitus. With regard to the treatment, after employing baths, lotions, and ointments in vain, Martin (who treated the patients in his private hospital) excised the diseased parts *in toto*, obtaining good union of the extensive wounds and complete relief of the distressing irritation, of which there had been no recurrence. Cases were reported by Schröder and Kustner, in which obstinate pruritus vulvæ was similarly treated with good results, but kraurosis has never before been treated surgically.

1038. *Spaeth and Hofmokl on Injuries during Coitus.*—Spaeth calls attention to the danger of allowing coitus to take place too soon after a lacerated perinæum has been repaired, and reports two unique cases. The patients were discharged from the hospital within a month after perineorrhaphy had been performed. In both instances intercourse occurred within two or three days after their return home, and transverse tears were caused in the posterior vaginal fornix, from which profuse hæmorrhage resulted which necessitated the application of sutures. It was remarkable that the injury occurred, not in the fresh cicatrix, but in the vaginal vault, which might be explained by the fact that the posterior wall of the vagina was shortened and thus put on the stretch in consequence of the operation. Another woman, perfectly healthy, married at the age of thirty-one, and from the first had pain during coitus. A few days after marriage she had violent pain during the act, which was followed by profuse hæmorrhage. Four days later fæcal matter escaped *per vaginam* while she was at stool. On examination the external genitalia were found to be normal. The columns of the posterior vaginal wall were torn away from their attachment, and there was a recto-vaginal fistula admitting the little finger. Hofmokl reports four cases from Vienna and Prague. In one case a powerful young man had intercourse with a widow, aged fifty-eight, causing a tear in the vaginal fornix with profuse hæmorrhage. In the second, violent coitus in a sitting posture produced a rupture of the posterior fornix involving the peritonæum; the patient lost much blood, but recovered. The third case was that of a girl, aged seventeen, whose lover had violent intercourse with her while she was in an exaggerated lithotomy position, causing a large tear in the right wall of the vagina. The fourth case was that of a young girl who had an undeveloped vagina with absence of the uterus and adnexa. During a forcible and unsuccessful attempt at coitus she sustained a deep laceration of the left labium majus, which was torn away from the vaginal wall. The tear extended upward into the mons veneris and downward toward the rectum, while the finger could be introduced into the vaginal wound to the depth of two inches. Profuse parenchymatous bleeding was checked by pressure, and the patient was discharged at the end of four weeks cured, but still anæmic from the loss of blood. In Spaeth's case of recto-vaginal fistula (the sixth on record), the injury did not occur during the first coitus, but after several successful attempts had been made; it appeared to be due not to any disproportion between the introitus and the male organ, but to an abnormal thinness of the recto-vaginal septum associated with a broad, resistant perinæum. He classifies the different injuries as follows:—Deep tears of the hymen, with profuse hæmorrhage, tears of the clitoris, of the urethra (in cases of atresia hymenis), vesico-vaginal fistula, laceration of the vaginal fornix (usually the posterior or lateral), and of the septum in a duplex vagina, to which should be added injuries of the vagina from premature coitus after perineorrhaphy.

Diseases of the Nervous System.

RECENT PAPERS.

1039. Goldscheider, Dr.—On a Case of Tabetic Ataxia with Sensation apparently Intact. (*Berliner klin. Wochenschr.*, No. 46, Nov. 17, 1890.)

1040. Bäumler, Prof.—On a Case of Spinal Disease with Ataxia due to severe Sensory Derangements. (*Ibid.*)

1041. Erb, Prof.—On Hereditary Ataxia (Friedreich's Disease). (*Berliner klin. Wochenschr.*, No. 41 Oct. 13, 1890.)

Art. 1039. *Goldscheider on a Case of Tabetic Ataxia with apparently Intact Sensibility.*—The patient, a woman, had been affected two years ago with a feeling of numbness and paræsthesia of the feet; also derangement of the gait. After a few months she was unable to stand with closed eyes, and could scarcely mount stairs; there was distinct ataxia; Romberg's and Westphal's signs were present; the pupils were not fixed. But an ordinary examination showed no derangement of cutaneous sensibility, and even passive movements were apparently felt as in healthy persons. The object of the author is to show that there was derangement of sensibility, after all, and that the usual coarse methods of examination are insufficient. The derangement of sensibility for passive motives was shown to be present by the author's instrument, which indicates the exact angle through which the limb must be moved before the movement is felt (*Zeitschrift für klinische Medicin*, Band xv.). In a healthy person the least angle of sensibility for the knee-joint is between 0·5 and 0·7 degrees; in the patient this angle was 4°, six or eight times as much as in health. Similar impairment was shown to exist in the ankle and toe-joints, and even the hip-joint was affected, though in less degree, while the elbow and shoulder joints behaved normally. Again, as regards the sensibility of the skin, a similar determination of the limiting values revealed impairment. A Marey's capsule was used, with a needle attached to the middle of the elastic membrane. The paræsthesiæ thus demonstrated were considered by the author quite sufficient to account for the ataxia. There are two theories on the subject, viz., that of Leyden, who refers the ataxia to disturbance of peripheral sensibility, and that of Erb, who assumes a derangement of the centrifugal paths. It is objected against Leyden's theory that in many cases impairment of sensibility is not apparent; that there are pure ataxic cases; also that there are pure cases of deranged sensibility without ataxia. The present case might easily have been taken as an example of ataxia without sensory disturbance. Such cases have not hitherto been properly examined, the usual methods being far too coarse. The other category, viz., of deranged sensibility without ataxia, has been emphasized by Prof. Rumpf (Marburg), who opposes the author's advocacy of the sensory theory. But Rumpf's chief case is really an ataxic one. E. J. Edwardes, M.D.

1040. *Bäumler on a Case of Spinal Disease with Ataxia due to severe Sensory Derangements.*—The patient, a man aged forty-four, had suffered from a contusion of the spinal column, with consequent paralysis, at the age of fifteen. The paralysis slowly left him, but during the last twelve years there had been motor disturbances and pains in the sacrum. On examination, the reflexes were increased, and sensibility of all kinds very much lowered, especially the muscular sense. There were remarkable ataxic derangements, chiefly in the upper limbs due to the sensory disturbances; they only appeared when sensibility was requisite to the movements made, but not in customary (automatic) movements where no special control was required. Bäumler calls this derangement "sensory ataxia," to distinguish it from "motor ataxia," and "cerebral ataxia."

1041. *Erb on Hereditary Ataxia* (*Friedreich's Disease.*)—This disease must be sharply distinguished from tabes dorsalis. Its chief clinical marks are as follows:—The family and hereditary appearance of the disease, the ataxia proceeding from below upwards to the speech and sight movements, the failure of tendon-reflexes, and the absence of sensory and bladder derangements. Prof. Erb brought forward two sisters, aged twelve and eleven years, at the meeting of the South-West German Neurologists in Baden-Baden last June They were of healthy family. In the elder the disease began at the age of six, in the other at the age of seven. Sensation was normal, the sphincters were unaffected, the muscular strength was good, and no cerebral symptoms were present. The first symptom in each case was uncertainty of gait, then followed uncertainty in grasping, eating, writing, and other functions; also alteration of speech and voice. Strange to say, the tendon-reflexes were increased; nevertheless, the author is of opinion that these cases belong to Friedreich's (hereditary) ataxy.

Pathology.

RECENT PAPERS.

1042. Smyth, Dr. W. J.—On the Blood and Urine of the Insane. (*The Journal of Mental Science*, October, 1890.)

1043. Bekhtereff, Prof. Vladimir M.— On Lesions of the Conus Medullaris and Cauda Equina. (*Vratch*, No. 39, 1890, p. 881.)

Art. 1042. *Smyth on the Blood and Urine of the Insane.*—The results embodied in this communication are the outcome of lengthened and laborious researches which have been carried out with an amount of diligence and carefulness deserving of the highest praise; and there can be little doubt but that they will have a considerable value as suggesting further inquiries in the same important direction. Four classes of patients have been subjected to examination and experiment for the purposes of the paper, including subacute cases of melancholia, epileptics, general paralytics, and the subjects of secondary dementia. Epileptics have been studied under the conditions of freedom from fits, during or immediately after fits, and in three cases the examinations were conducted for thirteen days on a mixed diet, and for twenty days on a fixed diet. The most careful arrangements were made to ensure accuracy and uniformity in the experiments, and comparisons were instituted with the blood of fifteen healthy men, aged between twenty-three and fifty years. In the case of epileptics there was an average diminution in the number of red corpuscles, and the same observation holds true also with melancholiacs and other insane conditions, the hæmoglobin being consequently markedly deficient as compared with what obtains in ordinary healthy individuals. The most conspicuous defect in this connection is, however, found in secondary dementia, the differences in amount in the three conditions of melancholia, general paralysis of the insane, and epilepsy being inconsiderable. It is shown also that the blood-plasma is especially dense among the insane, since, notwithstanding the deficiency of hæmoglobin, to which element the weight of healthy blood is greatly due, the difference between its specific gravity and that of the blood in insanity is extremely slight; hence the plasma must necessarily contribute to make up the weight-giving quality of the tissue. The variations in the other solid elements of the blood presented nothing much worthy of note, nothing of a constant character having been found in this relation. With regard to urine, Dr. Smyth finds that the amount of this fluid passed is greatest in general paralysis of the insane, in which it considerably exceeds the healthy standard, while it is least in secondary dementia. The total solids also are greatest in general paralysis, and least in secondary dementia, the variations being within small limits in the other diseases. The further conclusions arrived at in this connection are, that healthy men do not excrete more urea than insane patients; that in general paralysis, epilepsy, and melancholia, the urea seems almost equal in the amount secreted, though dements excrete less; that uric acid is increased in the excretions of the insane, being greatest in general paralysis, epilepsy, and dementia; that creatinine is higher in general paralysis and in dements than in health, and that phosphoric acid is in slight excess in epilepsy.

C. H. Wade.

1043. *Bekhtereff on Lesions of the Conus Medullaris and Cauda Equina.*—Prof. Vladimir M. Bekhtereff, of Kazan, contributes a very valuable paper on the subject, which certainly deserves to be brought before our readers in more or less detailed outlines. The author commences his sketch with a brief recapitulation of a series of physiological experiments which he has carried out, conjointly with Prof. P. I. Rosenbach, of St. Petersburg, in 1883-84, and published in the *Vestnik Klinitcheskoi ŭ Sidebnoi Psikhïatrïi*, 1884, vol. i., p. 155 (*vide* also the *Neurologisches Centralblatt*, 1884). The experiments were conducted on dogs, and consisted in a total division of the cauda equina by means of a double-edged knife, which was introduced in one group of the animals into the rhomboid space (that is, into the space between the last lumbar vertebra and the sacrum), and in another into the interstice between the two last lumbar vertebræ. The operation was invariably followed by a complete paralysis of the animal's tail, a more or less marked disturbance (loss of irregularity) in movements of the hind limbs, a complete anæsthesia of the whole tail, perineum, anus, genital organs, and the postero-internal aspect of the thighs, and paralysis of the vesical and rectal sphincters. In the case of the higher division, paresis of the posterior limbs attained an intense degree, the hind part of the animal's body swinging from side to side on walking, while anæsthesia extended almost over the whole postero-internal aspect of the hind limbs. In either group of the experiments a typical reaction of degeneration speedily developed in all paralysed muscles, to become complete in a fortnight after the operation. This characteristic train of phenomena, induced by division of the cauda equina in animals, most closely resembles the complex of clinical symptoms observed in man in cases of various lesions of the part and conus terminalis. To substantiate the proposition, the author reviews all cases of the kind yet known in international literature (*vide infra*), and supplements the list with a typical case from his own recent practice. The case refers to a Siberian merchant, aged thirty-five, a syphilitic of old standing, who sought Prof. Bekhtereff's advice on account of a gradually increasing weakness of his lower limbs, which had appeared a few weeks previously, to be followed by incontinence of urine, obstinate constipation, with occasional involuntary discharge of fæces, and a steady failure of sexual power ending in a total impotence. On examination, there was found paresis of the lower limbs (especially of flexors), the patient being unable to move about without a stick. On walking, he was throwing his legs somewhat forwards, experiencing much difficulty especially on descending staircases. The posterior femoral muscles were flabby and somewhat wasted, the patellar, cremasteric, and hypogastric reflexes normal, but the Achilles-tendon and gluteal (cutaneous) ones absent. There was present a profound pathic and tactile anæsthesia of the penis (from the glans up to the root of the member), urethra, scrotum, perineum, buttocks, and inner and partly posterior surfaces of the thighs and legs. A deep percussion elicited a distinct tenderness about the upper portion of the sacrum. Unfortunately, the patient left the town, and thus was lost from further observation. On the ground of a careful analysis of all published cases, the author gives the following general summary of clinical symptoms of disease of the conus medullaris and cauda equina. In acute cases, in initial stage, there may be not unfrequently observed a complete motor and sensory paralysis of the lower extremities, caused not only by lesions of the conus medullaris and the roots of the cauda equina, but also by simultaneous morbid changes in the lumbar enlargement of the spinal cord. Later on, when the morbid process becomes localised in the conus and cauda, the paralysis may disappear, yielding its place to a more or less prolonged paresis (mainly of the muscular groups on the posterior aspect of the thighs) and anæsthesia in the anal region of the buttocks, scrotum, penis, urethra, and, occasionally, inner surface of the thighs. In some cases, however, anæsthesia may extend to the posterior and partly external aspects of the legs, and even to the soles. Now and then, such anæsthetic areas prove to contain hyperæsthetic and paræsthetic patches. Another constant symptom, developing from the very beginning of the disease, consists in functional disturbance of the bladder and rectum, which at first is limited to paralysis of the respective sphincters, but subsequently may assume various other forms. In men, sexual power is almost invariably either considerably weakened, or totally abolished. In some rare cases, however, there may be observed only inability of ejaculating the seminal fluid, while the *potentia cœundi* remains apparently intact. Not unfrequently, paralysed muscles undergo atrophy with alteration of electric irritability or, sometimes, even a genuine reaction of degeneration. [By the way the author draws attention to loss of faradic irritability of a paralysed rectal sphincter which was observed in Kozloff's patient, and which "can be undoubtedly detected in other similar cases."] There may also occur other disturbances of nutrition, such as acute decubitus in the sacral or sciatic region, etc. Tendon-reflexes, as a rule, remain intact, except the Achillean one, which is frequently either absent or lowered. In subacute and chronic cases, the said phenomena develop more slowly or deliberately, while usually from the very beginning there appear impairment of the sexual power, alterations in the reflex action of the bladder and rectum, as well as changes in cutaneous sensibility, but a motor paresis of the limbs and sphincters supervenes only in later stages. Of other clinical characteristics there are to be mentioned lesions of the lumbar vertebræ or sacrum (such as fractures or dislocations in traumatic cases), and tenderness of the bones on pressure or percussion. Passing to a differential diagnosis, the author points out that in such cases where this or that morbid process involves not only the conus terminalis and cauda equina, but also the lumbar enlargement of the spinal cord, there are observed paraplegia, paralysis of the vesical and rectal sphincters, sexual impotence, and a very characteristic anæsthesia, which extends over the whole length of the lower limbs, as well as the lumbar region, and even the lower portion of the abdomen; the upper boundary of the anæsthetic area being constituted by a line passing from the lower dorsal vertebræ towards the median line of the abdomen, at some level between the navel and pubes. Besides, there is always detected a total absence of the knee and Achillean tendon-reflexes, as well as of the podal, cremasteric, gluteal, and, sometimes, even hypogastric cutaneous reflexes. In cases of a localised myelitis or other lesion, situated in the lower portion of the dorsal division of the spinal cord, the chief differential points consist in the presence of a hyperæsthetic zone (lying correspondingly to the level of the spinal lesion), the absence of paralysis of the vesical and anal sphincters, the absence of atrophy (and reaction of degeneration) of paralysed muscles, increased cutaneous reflexes, and clonic trepidation of foot; while, in cases of one-sided lesions of the kind, there are also present symptoms of Brown-Séquard's paralysis (which is never observed in cases of one-sided lesions of the cauda equina). Multiple peripheral neuritis and tabes (which hardly can be mistaken for affections of the conus or cauda) are characterised by a different distribution of anæsthesias and motor disturbances, intense subjective sensory symptoms (pain, paræsthesias), etc. Lesions of the sacral plexus outside of the vertebral canal are differentiated from those of the cauda equina by one-sidedness of symptoms, as well as by a localised tenderness of the nerve-roots. Affections of the conus medullaris alone seem to differ from those of the cauda equina mainly in the absence of any disturbances of gait, and in anæsthesia being limited to the area supplied by the pudendo-hæmorrhoidal nerves. As to the causation of affections of the conus and cauda, traumatic injuries to the lower part of the vertebral column (fall backwards, etc.), syphilis and new growths constitute the most prominent etiological trio, the former two being especially frequent. [Notwithstanding the circumstances that the affections under consideration represent a fairly common occurrence, international literature on the subject is exceedingly scanty. The author has only been able to collect the following cases:—(1) Westphahl's (*Charité-Annalen*, 1876); (2) Roth's (*Neurolog. Centralblt.*, No. 4, 1884); (3) Kahler's (*Prager Medicinische Wochenschrift*, 1882); (4) Eisenlohr's (*Neurolog. Centralbl.*, No. 4, 1884); (5) Thornburn's (*Brain*, 1888); (6) Oppenheim's (*Archiv. fuer Psychiatrie*, 1889, vol. i.); (7) Kirchoff's (*ibid.* vol. xv.); (8) Rosenthal's (*Wiener Medicinische Presse*, Nos. 18-20, 1888); (9) Bernhardt's (*Berliner klin. Wochensch.*, No. 32, 1888); (10) Armin Huber's (*Wiener med. Wochensch.*, Nos. 30 and 40, 1888); (11) W. Osler's (*The Medical News*, 1888); and (12) Vasily N. Kozloff's (*Meditzinskoië Obozrenïë*, No. 4, 1890, p. 333). Dr. Kozloff's case is that of a robust peasant lad, aged twenty-one, who was admitted to Prof. A. H. Gay's clinic, in Kazan, about a twelvemonth after a fall on ice, from the height of fourteen feet, his buttocks coming first in contact with the surface. He had not lost consciousness, but still had been unable to get up without his mates' aid. For three or four weeks he remained bed-ridden, though he did not experience any intense pains about the injured region. Since the third day after the accident, incontinence of urine set in; for two weeks he was constipated, while later on there supervened involuntary defecation. In the course of time an abscess developed in the injured area, which subsequently burst spontaneously, discharging a few small bone fragments with pus. In a fortnight suppuration ceased, but an obstinate ulcer formed at the spot. On examination, there was found a complete anæsthesia of the whole penis, urethra, scrotum, perineum, anus, two lower thirds of the buttocks (including the whole intergluteal sulcus), the posterior aspect of the thighs, and a small adjacent area of the legs. There was present, further, paralysis of the vesical and anal sphincters, the latter giving no response even to a faradic current. There also existed paralysis of the bulbo-cavernous muscle (the "ejaculator seminis" of anatomists), since, during nocturnal pollutions, the seminal fluid was only slowly flowing out from the urethra, drop by drop, instead of being ejaculated in a jet-like fashion. Erections, however, were apparently normal (though a total sexual impotence had existed for the first seven or eight months after the accident). According to the author's theory, the symptoms were caused by meningeal hæmorrhage, the extravasation pressing on the conus terminalis and the roots of the pudendal, sacral, and coccygeal plexus. An important series of observations bearing on the subject has been recently published by Dr. William Thornburn in the *British Medical Journal*, May 4, 1890, p. 993. — *Reporter*.]

Valerius Idelson, M.D.

Bacteriology.

RECENT PAPERS.

1044. Scholl, Dr. Hermann.—On Investigations into Cholera-toxines. (*Berliner klin. Wochscr.*, No. 41, Oct. 13, 1890.)

1045. Cunningham, Surgeon-Major.—On the Comma-Bacillus of Cholera. (*India Medical Gazette.*)

1046. Persistence of the Typhoid Bacillus in the Body. (*La Semaine Médicale.*)

1047. Vaillard and Vincent, Drs.—On the Virus of Tetanus. (*Bull. Med.*, Nov. 10, 1890.)

Art. 1044. *Scholl on Investigations into Cholera-toxines.*—The conclusions of the author's experiments, made in the Hygienic Institution of the (German) University of Prague, are as follows:—"The toxic peptone which I have produced from genuine albumen, after its destruction by anaërobiosis, is quite distinct from Petri's toxo-peptone (formed by aërobiosis), because the latter is not destroyed by boiling, while mine is rendered inert. My choleraicpepto-toxine shows far more poisonous and characteristic properties than the toxines of Brieger and Petri formed by aërobiosis in peptone solutions, for the toxine which I procured (by the cultivation of cholera bacilli) from a single egg was sufficient to kill ten guinea-pigs in ten minutes with acute paralytic symptoms. The assertion of Hueppe and Wood, that more and stronger toxines are formed by cholera bacilli by anaërobiosis than by aërobiosis, is fully confirmed by my experiments, which negative the opposite assertions of Petri."

E. J. Edwardes, M.D.

1045. *Cunningham on the Comma-Bacillus of Cholera.*—In a recent number of the *Ind. Med. Gaz.* Sur.-Major Cunningham publishes some interesting observations on the comma-bacillus of cholera. His researches have led to to the conclusion that several distinct species of comma-bacilli are associated with cases of cholera in Calcutta. Three very district species are present, which are not, as a rule, associated with one another, so that individual cases yield cultivations of one or other species only. Further, and this is a curious fact, the occurrence of the individual species, in so far as observations have yet gone, has appeared not to be related to any character in the cases, but to the localities from which they were derived, the cases furnished by the General Hospital being associated with one species, those furnished by the Medical College Hospital with a second, and those furnished by the Sealdah Hospital with a third.

1046. *Persistence of the Typhoid Bacillus in the Body.*—Chatemesse reports a case of typhoid fever with so many relapses that the duration may be said to have extended over five months. Orloff has published a case in which a pure culture of the typhoid bacillus was obtained from an osteo-myelitic abscess, nine months after the beginning of the affection. Achalme has reported a similar case. The writer observes that these cases are rare, but that they teach the possibility of prolonged infection in typhoid. He calls attention to the fact that abscess in this disease is usually caused by the various forms of suppurative bacteria (secondary mixed infection, ref.) In the discussion Rendu reported a case with three relapses and a duration of three months. Netter, one with a duration of six months and six relapses. In this last case an abscess developed that contained only suppurative bacteria.

1047. *Vaillard and Vincent on the Virus of Tetanus.*—The authors premise that the bacillus of Nicolaïer does not multiply in the organs, and is only to be found in and around the site of inoculation. This fact seemed to authorise the supposition that the constitutional disturbance must be due to a poison secreted by the bacillus and absorbed into the circulation. To demonstrate the existence of this poison, it is necessary to filter a pure culture of the bacillus of tetanus through porcelain. A cubic centimètre of the resulting clear fluid, injected into the guinea-pig, promptly determines a well-marked attack of tetanus, and death results in about thirty-six hours. When introduced into the stomach, however, this fluid, even in large doses, gives rise to no symptoms of any kind, while a four-hundredth c.c., injected into muscles, provoked tetanus limited to the limb operated upon. Brieger believes the poison to belong to the ptomaine series, but Faber classes it with the disastasic poisons, and with the diphtheritic diastase of Roux and Versin, in particular. The authors adopt the latter view, on the ground that the poison is mitigated by a temperature of 60° C., and is destroyed at 65° C. It rapidly deteriorates on exposure to air and light, but if protected from the action of oxygen, it preserves its toxic effects intact. Acidification of the liquid does not modify its toxic action. The addition of absolute alcohol precipitates the poison in part, and the precipitate causes tetanus when introduced beneath the skin. Like all bodies of the diastasic class, it acts in infinitesimal doses. The poison dialyses in its entirety, and the injection of solutions, rendered inert by healing, &c., confers no immunity against the active virus.

Dermatology.

RECENT PAPERS.

1048. SUCKLING, DR.—On Acute Scleroderma (*Birmingham Medical Review*, December, 1890.)

1049. BREDA, PROF.—On Massage in the Treatment of Scleroderma. (*Riv. Veneta di Scienza Mediche.*, tom. xi. 1889; *Monats. f. Prakt. Derm.*, vol. xi. No. 9.)

1050. LUCIANI, DR.—On Clinical and Histological Studies of a Case of Psoriasis gravis. — (*Clinica Dermopatica di Genova*, 1889-90; *Monats f. Prakt. Derm.*, vol. xi., No. 9.)

1051. ROTHE, DR.—On Creolin in Erysipelas and Eczema. (*Attenburg. Memorabilien*, ix.; *Brit. Jour. of Dert.*, Nov. 1890.)

1052. FRANK, DR.—On the Connection between Genital Affections and Skin Diseases. (*Zeitschr. f. Heilk.* Band xi., p. 107; *Archiv. f. Derm. u. Syph.*, Heft 6, 1890.)

1053. GIRODE, M. J.—On Two Cases of Melanodermia of Nervous Origin. (*Annales de Derm. et de Syph.*, No. 10, 1890.)

1054. JUHEL RENOY AND G. LION, MM.—On Histo-biological Researches regarding Nodular Trichomycosis. (*Annales de Derm. et de Syph.*, No. 10, 1890.)

ART. 1048. *Suckling on Acute Scleroderma.*—A man, aged forty, the subject of that very rare form of skin-disease to which the term scleroderma is very generally applied, was exhibited at a recent meeting of the Midland Medical Society by Dr. Suckling, the patient being an iron caster, who first complained of hardness and tightness of the skin of his body and limbs. The condition had gradually come on for four weeks, commencing in the calves of the legs and spreading to the thighs, chest, neck, and face, the latter regions feeling especially stiff. At the beginning of his illness the man had suffered from a severe cold, his occupation exposing him to frequent variations of temperature; he had contracted a chancre twenty years before, but in the interim had been free from illness. The skin was characteristically stiff and hard, particularly over the neck, and it could not be pinched up or moved over the bones. Save, however, for a pigmented appearance and oily feel, the cutaneous structures exhibited another apparent alteration, the transition from hard to soft skin being indicated by no line of demarcation. Some improvement in the patient's condition occurred during his stay in the Queen's Hospital at Birmingham.

1049. *Breda on Massage in the Treatment of Scleroderma.*—The author tried the application of massage in the case of a patient, aged thirty-six, whose whole body was covered with a diffuse eruption of scleroderma, which had resisted other methods, of treatment. The treatment lasted during a period of three months, consisting of sixty-five sittings of one-and-a-half hours' duration. The sclerodermic patches healed perfectly, although they were in different stages of development.

1050. *Luciani on Clinical and Histological Studies of Psoriasis gravis.*—Dr. Luciani examined a section of psoriasis skin, stained with red violet, and found in the cutis a great number of leucocytes in the condition of karyokinesis. This fact leads the author to suppose that psoriasis may be present as a disease of the derma as well as of the epidemic.

1051. *Rothe on Creolin in Erysipelas and Eczema.*—The author employed, in treating cases of erysipelas, an ointment consisting of creolin, 1·5; cret. præp. axung. porc. āā. 15·0; ol. menth. pip. gtt. v.; two or three applications being made. Cotton wool was used as a covering. Improvement always occurred in twelve to twenty-four hours, and cure resulted in from three to four days. In the treatment of eczema the ointment was found serviceable, and in a case of scabies, after washing with soft soap and the inunction of the ointment, the effect was decided.

1052. *Frank on the Connection between Genital Affections and Skin Diseases.*—The author states that an unmarried seamstress, aged twenty-eight, suffered for three years from headache and a burning feeling which arose from an eruption of the skin in the form of large bullæ on the back, face, and extremities, the contents of which were clear. The eruption subsided after fourteen days, leaving pigmentation. Almost at the same time disturbances of menstruation occurred, oöphoritis and salpingitis following. Menstruation became more difficult, and each time there appeared a new eruption of urticarial exanthem, and the condition of the patient became more and more unendurable. Both tubes and ovaries were removed by laparotomy, and from that time the patient was free from pains in the abdomen, and has remained free from eruptions of the skin. The observations were continued during a period of two years.

1053. *Girode on Two Cases of Melanoderma of Nervous Origin.*—The author gives particulars regarding two cases of melanoderma. The first was that of a man, aged twenty-five, in whom the disease first appeared in the neighbourhood of the left breast, extending afterwards to the left arm. At the same time there appeared analogous "plaques" to the left of the umbilicus. The disease then extended to and encroached upon the back of thorax. It formed a track in the shape of a half-circle, which was almost continuous, reaching nearly to the median line in front, passing the breast beneath the left armpit, twisting round the scapula, and terminating at seven or eight centimètres from the median line behind. The eruption consisted of small, black, lenticular spots, isolated or united into larger plaques, with polycyclic contours of a brownish colour. The pigmentary spots are well limited. From the first half-circle and from the armpit hyperchromia radiated towards the left arm in two tracks, the upper one corresponding to the border of the large pectoralis major and the deltoid, the lower and posterior one following the course of the axilla-humeral artery. The tracks, at first separated by the breadth of the biceps, unite so as to follow on the forearm the direction of the ulnar nerve as far as the wrist. On the arm and forearm pigmentation was equally distributed in multiform plaques, which were rather less black. The skin on their level was slightly thickened, and presented a few very fine scales. On the abdomen an elongated plaque descends obliquely towards the umbilicus, then to the left of the white line as far as the pubes. No anæsthesia was observable. The secretory functions were not disturbed. The second case occurred in a man, aged thirty, in whom patches of melanosis were present on the left side at the limit of the thorax and abdomen. They commenced about three finger-breadths from the eleventh dorsal spine, following the general direction corresponding to the intercostal space and passing forwards to the abdomen, and terminate about four centimètres from the inter-median line, a little below the umbilicus. Although the pigmented line was scarcely continuous, even between the patches, the skin was slightly darker. There were four patches darker than the others. The contour was regular. The line was entirely macular, the consistence or thickness of the skin not being affected; the colour was very deep, the surface smooth, but not shining. No disturbance of sensation nor cutaneous secretions was present.

1054. *Juhel Renoy and G. Lion on Histo-biological Researches regarding Nodular Trichomycosis.*—The authors state that nodular trichomycosis is exclusively found in persons having long hair, and that it is exceptional to observe it either in a man's hair or beard. The disease is met with most frequently in youth, but it has also been seen at the age of sixty. It is observed in different climates, and temperature does not appear to have much effect on its development. When left to take its course, the duration of the disease is indefinitely prolonged. The first difficulty experienced in regard to cultivations, is the isolation of the fungus which gives rise to the disease. This is most easily done by sowing a hair on milk serum which is slightly acid. If the hair floats, at the end of thirty-six or forty-eight hours, there develops on the surface of the liquid a thin film, which is smooth or slightly wrinkled, and by degrees reaches the sides of the glass upon which it soon encroaches. If the hair fall to the bottom, the nodules become the origin of mycelian tufts which are fragmentary, adherent to the glass, and which on reaching the surface give rise to a film similar to the preceding. When placed on veal or beef broth, this first culture produces mycelian tufts which develop as a film of a somewhat thicker and more pronounced character. A white dust quickly covers it. These characters are preserved on different liquid mediums, but in those which are more favourable to the development of the fungus they assume exaggerated proportions. Cultivations on solid mediums are not less important. *Gélose*, especially glycerine *gélose*, afford excellent media. The fungus is sown in lines, after which there forms a thick mass which at first is slightly yellow, but which soon becomes covered with a white dust. This is formed of an innumerable quantity of folds which cross each other in all directions, and present the appearance of bundles of small worms. The culture gradually extends until the sides of the tube are reached. At the extremity of the tube it forms a thin, transparent, radiated layer which, without the aid of the microscope, might be mistaken for a radiation of mycelian filaments. Sowing in lines on gelatine gives an analagous culture, which does not extend to the sides of the glass and whose borders show radiated, rather short prolongations. The appearance which it presents is somewhat like that of a caterpillar. Microscopical examination showed that all the cultures contained mycelian spores and filaments, these elements differing according to the nature of the nutritive medium and the age of the culture. The authors never observed anything which resembled the commencement of fructification. Sometimes masses of spores were produced which presented the aspect of bunches appended to the mycelian branches, but these masses always closed when the interspersed filamentous forms were carefully studied, and often gave rise, at one or more points of their periphery, to new mycelian branches. It would therefore appear that nodular trichomycosis can only be reproduced by segmentation of its mycelium, or by the budding of its spores. The authors frequently observed in plate or moist cell cultures long mycelian prolongations, twisted into a spiral form or rolled back upon themselves in a more or less complex manner. Nodules were sometimes seen formed by the rolling and entanglement of several of these filaments. In treating the disease, the authors found warm water, and sublimate solution, even when cold, appeared to cause the rapid disintegration of the fungus. They consider the conclusion justified that repeated applications of sublimate solution (1 in 1,000), employed as warm as could be borne, would lead to a rapid cure. The action of warmth and of bichloride of mercury might be aided by that of ether of petroleum, the destructive power of which deserves notice.

Laryngology and Otology.

RECENT PAPER.

1055. Delavan, Dr.—On the Early Diagnosis of Malignant Disease of the Larynx. (*N.Y. Medical Journal*, Nov. 8. 1890.)

Art. 1055. *Delavan on the Early Diagnosis of Malignant Disease of the Larynx.*—Dr. Delavan classifies the cases where exceptional difficulties arise as follows:—(1) Cancer of the larynx may be uncomplicated, but the diagnosis obscured by the absence of the usual signs and symptoms. On the other hand, conditions other than cancer may be mistaken for that disease. (2) Cancer of the larynx may be associated with or mistaken for tubercular disease. Conversely, tubercular disease may closely resemble cancer. (3) Cancer may be associated with or simulate specific disease. On the other hand, syphilis may be readily mistaken for cancer. The author describes cases which have occurred in his own practice where difficulties of the nature referred to, in each of the above classes, rendered the diagnosis difficult. He remarks that even the most marked and constant symptoms may be absent in the earlier stages. The common symptoms—aphonia, cough, dysphagia—may at first be wanting. The appearance of the growth and the general history, are often misleading throughout the earlier stages. Pain of a lancinating character will sometimes be absent in the early history of laryngeal epithelioma. Swelling of the cervical glands is useless as an early diagnostic sign. The author proceeds to discuss three aids to diagnosis which have lately been advanced. (1) Thickening of the mucous membrane with marked loss of motion in the neighbourhood of such thickening, implies an infiltration of the muscles, which, it is said, is generally due to malignant disease. An apparent paralysis of one side of the larynx, associated with thickening upon the same side, should always call for extreme caution in the matter of prognosis. (2) Recent observations have shown that papillomatous growths, the bases of which are not surrounded by a zone of inflammation, are probably benign, while those which are encircled by a ring of reddened infiltrated mucous membrane, are almost certain to be malignant. (3) Trans-illumination of the larynx, first suggested by Voltolini, has been studied of late by several observers. It would, however, hardly be possible by this method to recognise the presence of an abnormal thickening which was not sufficiently developed to be recognised with the eye, in an ordinary examination. On the whole, the author concludes that we are still, in spite of recent allegations, far behind in the knowledge necessary to the successful radical treatment of malignant laryngeal disease.

J. B. Ball, M.D.

Ophthalmology.

RECENT PAPER.

1056. Chandler, Dr.—On a New Method of Cataract Extraction. (*Boston Med. and Surg. Jour.*, Oct. 1890, p. 365.)

Art. 1056. *Chandler on a New Method of Cataract Extraction.*—Dr. Chandler records fifty cases of cataract extracted by a new method. It is performed in the following manner:—After a corneal cut, exactly at the corneal-scleral junction, a very small piece of iris about one or two millimètres from the periphery is caught up, and gently drawn out, then cut horizontally as close to the gripping instrument as possible; this leaves a small round opening not more than one to two millimètres in diameter. The lens and cortical are now pressed out in the usual manner, particular care being taken that the cortical shall follow the lens before replacement of the iris takes place. After removal of the pressure, the iris usually replaces itself; if there is any difficulty a Daviel's spoon, or any other suitable instrument, can be used for its replacement. A one-per-cent. solution of atropine is instilled and applied at each subsequent dressing. The reason for making a small opening is to allow the free escape of the aqueous which collects behind the iris, otherwise when a sufficient quantity has been secreted, any movement of the eyeball inducing a gaping of the wound is followed by a rush of aqueous and a washing out of the iris in some cases. The author has had marked success in his experience with this operation.

Richard Neale, M.D.

Reviews.

Article 1057.

Localised Peritonitis. By John Wallace, M.D. (Ed.) London: Baillière, Tindall & Cox. 1890.

Dr. Wallace advocates the radical treatment of localised peritonitis resulting in the formation of purulent collections, and affirms that since the year 1880 he has uniformly opened and drained such collections, with a success which is sufficiently gratifying. In the case of foul-smelling contents, the abscess' cavity should, he recommends, be freely washed out with a one-in-forty solution of Seabury and Johnson's hydronaphthol liquor, the effect of which, in destroying the intense odour, is described as magical. The difficulties in the way of diagnosis, which occur in connection with extensive pelvic cellulitis, are touched upon, and the value of exploratory treatment in such cases is urged, the subsequent free drainage under circumstances that call for it being then easy of adoption. A considerable number of interesting and instructive histories is appended to the essay, and the remarks appended to them will be found most useful as a help to practitioners who may be called upon to deal with similar instances in their own experience. Again and again, in the course of the cases recorded, the inestimable value of copiously flushing the abdomen with warm water is illustrated, the peritoneal cleanliness thus obtained having been obviously instrumental in the saving of life to a high degree. A most remarkable example of this is supplied by the history of Case VII. in Dr. Wallace's collection. The work itself will well repay a most careful perusal.

C. H. Wade.

Article 1058.

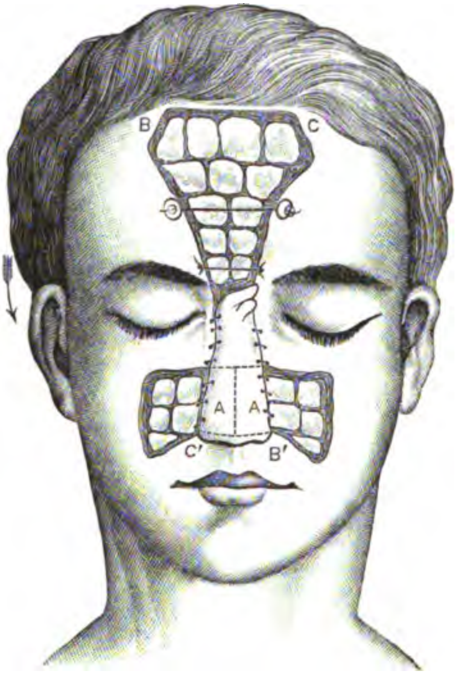
Principles of Surgery. By N. Senn, M.D., Ph.D., Professor of Surgery and Surgical Pathology in the Rush Medical College, Chicago (Ill.), etc., etc. Philadelphia and London (40, Berners Street, W.): F. A. Davis. 1890.

If it be true of medical works that frequent editions of treatises bearing thereon are a necessity in order to keep in touch with the advance of knowledge, the obligation is doubly true as applied to surgery, and this may fairly be extended so as to justify a fresh work on the subject. During the last few years not only has the practice of surgery undergone noteworthy modifications, but the very principles have been overhauled and revised. More than one of the most recent and commendable innovations are associated with the name of the author; hence he owes no apology to the profession for placing before them a work re-modelled in accordance with the latest views, provided that he remedies the shortcomings which undeniably exist in so large a proportion of the text-books by English and American authors, which have made their appearance in rapid succession during the last decade or two, most of which, we are told, though replete with valuable practical information, are defective in those parts relating to the matters treating of the fundamental principles of the art and science of surgery.

It is obviously impossible for the surgeon to prepare and retain in his memory cut and dried precepts of conduct for every possible emergency. It is, therefore, incumbent upon him to thoroughly master the principles of surgery, after which he will, if he possess the requisite moral qualities, have no difficulty in applying his knowledge in practice. The author is careful to inform his readers that it has been his intention to keep in constant view the difference between the cellular processes as we observe them in regeneration and inflammation, and to connect the modern science of bacteriology more intimately with the etiology and pathology of surgical affections than has hitherto been done by most writers on the same subject. Considerations of space, however, have prevented his carrying out this part of his scheme in relation to tumours, a lapsus which he proposes to remedy in the near future by the publication of a separate volume on "The Pathology and Surgical Treatment of Tumours."

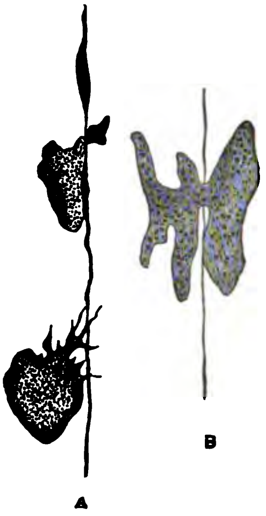
The author commences with a formal differentiation of the processes of inflammation and regeneration. These are no longer to be confounded or considered from the same etiological and pathological standpoint. Aseptic surgery has familiarised us with regeneration *sine* inflammation, and the surgeon's success will in future be measured by the degree to which he demonstrates their separate identity; in other words, by the extent in which he averts the febrile complications formerly held to be part and parcel of the process of repair. Under the unwieldy and uneuphonious designation of "karyokinesis," we are initiated into the process, described by Flemming, of the indirect reproduction of cells as compared with direct cell-division by segmentation. We cannot here enter upon the discussion of such recondite physiological processes; suffice it to say that the illustrations in support of these views are exceedingly artistic and instructive, though possibly somewhat diagrammatic.

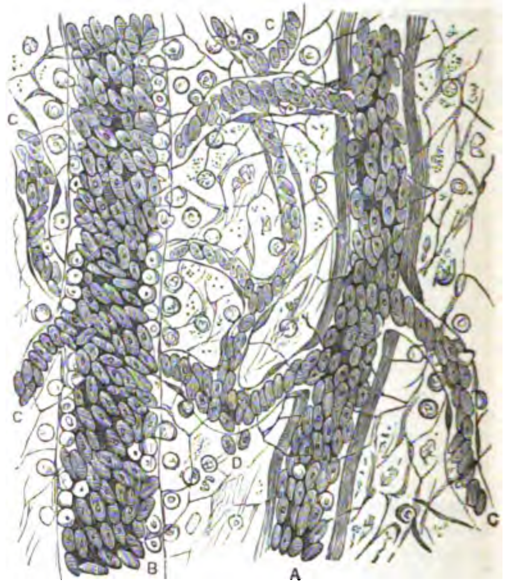
Passing on to the more practical topics, we come to the consideration of the regenerative process in various tissues. Under this head we have the most recent improvements in the *technique* of rhinoplasty and skin-transplantation, illustrated by a woodcut from Thiersch's work on the subject (Fig. I.).



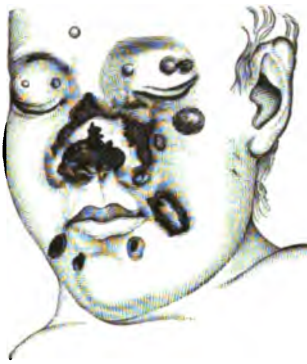
Our views as to the possibilities of repair in such structures as nerves, etc., have undergone considerable modification of late, and the results before us of what has been effected in this direction by skilful surgeons, aided by scrupulous attention to the principles of antiseptic surgery, will serve to encourage others to labour in the same field.

The chapter on inflammation still further emphasizes the distinction between regeneration and inflammation, the latter term being reserved to conditions caused by the presence of one or more varieties of pathogenic microbes. This is a rather bold departure, especially in view of the author's admission that a "correct definition of inflammation which should embody the etiological, anatomical, and pathological characteristics, from our present knowledge of the subject, is impossible." The mechanism of inflammation as observed under the microscope is illustrated by a series of woodcuts, most of which are more or less familiar to us, as evidenced in the drawing of a leucocyte passing through the capillary wall, and another showing the process of inflammation, as seen in the frog's web, at the stage where the capillary stream is impeded by commencing emigration. We are, however, unable to reconcile either the descriptions or the illustrations with the author's hypothesis of the nature of true inflammation.





The *rôle* of micro-organisms, in relation to the production of inflammatory complications, has naturally attracted a good deal of the author's attention. Interesting as these facts undoubtedly are, there is every likelihood of their undergoing further evolution within the near future, so that, though clearly stated and aptly applied, these views cannot be regarded as other than provisional. It is, nevertheless, impossible to ignore the importance of modern discovery and observation in relation to such diseases as septicæmia, pyæmia, erysipelas, tetanus, and hydrophobia, and the author has done full justice to these topics. Tuberculosis, in forms of interest to the surgeon, is a subject, just now, of special attraction, and while the author's view as to its pathology may continue to hold good, his curative measures may shortly require to be adjusted to still more recent discoveries. The volume concludes with the consideration of actinomycosis hominis, anthrax, and glanders (Fig. IV).



It will be seen that the author has devoted himself mainly to the *principles* of surgery, a department usually subordinated to the more practical elements. The volume contains a good deal of debateable matter, but it marks a stage in the evolution of the science, and is full of encouragement for the future. It is admirably printed, and contains over a hundred wood-engravings. In conclusion, it may fairly be commended as the embodiment of the latest views on the principles underlying the practice of surgery and as a credit to its author.

ARTICLE 1059.

Ointments and Oleates in Diseases of the Skin. By JOHN V. SHOEMAKER, A.M., M.D., Professor of Materia Medicine, Pharmacology and Therapeutics, and Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc. etc. Second edition. Philadelphia and London: F. A. Davis. 1890.

THE present edition is a very different work to its predecessors, covering, as it does, a much larger ground far more completely. Bacteriology has not banished ointments from the therapeutic arsenal, and their use is now as general and as beneficial as ever. Though not the inventor, nor even the first to introduce the oleates to the profession, Dr. Shoemaker has made their preparation and therapeutical application a special study, and we are therefore indebted to him for a series of elegant and active products, which, as ointments and salves, are in many respects superior to the metallic and other salts previously in vogue. This volume, however, though it deals exhaustively with the pharmacy and pharmacology of the oleates, is not restricted to these narrow limits, but treats of the preparation and use of ointments as a science *per se*. We are given working formulæ for every conceivable ointment that the professional mind can compass—and even more. Seeing that certain skin-diseases are among the commonest and most intractable of the ills that afflict humanity, a book of this kind cannot fail to be a valuable work of reference.

ARTICLE 1060.

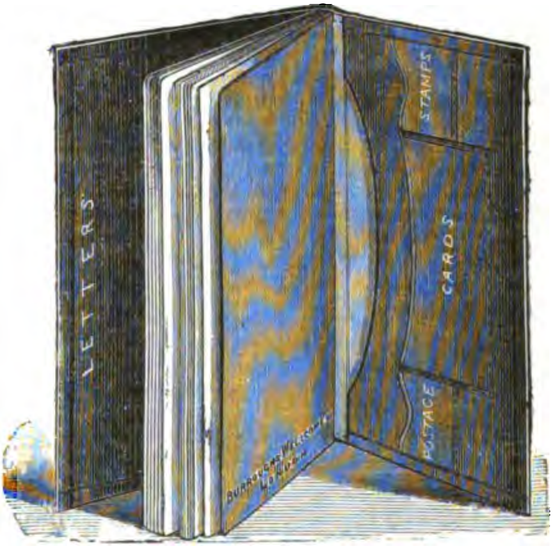
The Medical Bulletin Visiting List. London (40, Berners Street, W.): F. A. Davis.

THIS is the latest innovation in the matter of visiting-lists, and is the most ingenious as well as the most concise and portable that we remember to have seen. Its salient feature is the use of short "stubs," or narrow leaves, so that it is unnecessary to re-copy the names more than once for each month, or even less often, if the number of patients does not exceed the number of lines on the page. It is, moreover, a perennial diary, for no dates are given, each month being filled in as used. This is certainly a time- and labour-saving arrangement, and deserves a special mention. The paper is hard and opaque, without being unduly thick; and the book, of much smaller compass than usual, is neatly and solidly bound in leather. Those of our readers who have not yet provided themselves with a *Visiting List*, will be well advised in giving it a trial.

ARTICLE 1061.

The B. W. & Co. Medical Diary and Visiting List.

WE have received a copy of the 1891 edition of Messrs. Burroughs, Wellcome & Co.'s *A.B.C. Medical Diary and Visiting List*, with which is combined the *A. B. C. Modern Materia Medica.* The Medical Diary and Visiting List part is of the orthodox pattern, and contains space for the entry of fifty patients' names, but a double-sized diary with space for 100 names is also supplied. In addition to this there is the usual obstetric table and notes relating to fees in special cases. The Materia Medica comprises the latest information with reference to new drugs of recognised value, and notes respecting new uses which have been suggested for remedies of older standing. This portion is printed on thin tough paper, and altogether the size of the book is not larger than the usual Visiting List in use by the general practitioner. The book is covered in silk, and is made to fit into a handsome leather wallet, which may be used indefinitely, and is much more convenient than the usual tuck covering. Moreover, the cost of this diary is much lower than that charged for the ordinary published diaries.



AT the beginning of the year 1890 the number of lunatics in Great Britain was 86,067, being 1,727 in excess of the year before.

ARTICLE 1062.

A Handbook of the Theory and Practice of Medicine. By FREDERICK T. ROBERTS, M.D., F.R.G.S., Professor of Materia Medica and Therapeutics and of Clinical Medicine at University College, etc. etc. Eighth edition. London: H. K. Lewis. 1890.

IT is a trite saying, but it is not the less appropriate, that a book that has gone through a large number of editions, must have fulfilled the object with which it was originally written. Such is the case with this voluminous treatise by Dr. Roberts, which for many years has, with perhaps one serious rival, monopolised the popularity of medical students, at any rate in London. Shortcomings which were criticised in the earlier editions have been remedied, omissions have been filled, and later information added, without affecting the general plan of the work. The outcome is a ponderous volume, containing upwards of a thousand closely-printed pages, which is not only thoroughly suited for the use of students, but constitutes a valuable addition to the library of the practitioner who, however experienced or well informed, is fain to seek additional information, from time to time, to supplement his own unaided resources. The printing, though close, is admirably clear, and reflects great credit on the publisher, and the amount of information is simply enormous. Dr. Roberts writes in a thoroughly practical strain with a due regard to classification, a detail want of attention to which detracts from the value of many otherwise very valuable works of this description.

New Articles.

A NEW ROLLER BANDAGE.

A CORRESPONDENT calls our attention to a new selvidged bandage which Mr. H. Dalmas, of Leicester, has added to his list of useful rollers. This bandage is made of an unbleached, strong, porous material, allowing of slight stretching, but not elastic. It is seven inches wide, and is sold at three shillings per bandage of twelve yards in length. It certainly appears well adapted for use as a thoracic or abdominal support, as, for example, in the treatment of fracture of the ribs and in parturition. In short, it is cleanly, efficient, and cheap.

DERMATOS SOAP.

MANUFACTURERS of soaps, or some of them, have at last recognized the desirability of making their soaps neutral, so as not to cause roughening and irritation of the skin. Dermatos soap, made in accordance with the latest improvements in the chemistry of saponification, is hard but soluble, gives a good lather even with hard water, and, so far as one can judge from clinical observation, is devoid of any irritating effect even on the most delicate or excoriated integument. It is certified to contain no free alkali, but a certain proportion of unsaponified natural fat enters into its composition. As a toilet soap, we know of none that surpasses it for durability, blandness, and comfort. The manufacturers are Messrs. F. James and Co., 61, Mark Lane, E.C.

ABSORBENT WOUND-DRESSING LINEN.

MESSRS. KHRONE AND SESEMANN, of Duke Street, Manchester Square, have submitted to us samples of Prof. H. Tellemann's (of Leipsig) wadding for dressing wounds and keeping them aseptic. It is made of linen, and is in the form of a snowy white "wool," highly absorbent, and singularly well adapted for the purpose for which it is prepared. Both it and the gauze, of the same substance, are exceedingly light, and have been sterilized by a steam-pressure of two or three atmospheres. We hope to report from practical experience later on, but as it is supplied at a very moderate cost, it ought to meet with a favourable reception at the hands of surgeons.

THE "THERAPEUTIC" PIPE.

DR. C. W. JONES, of Bowdon, Cheshire, struck with the inconveniences which follow tobacco-smoking by means of the ordinary pipe, has devised an improved form of smoking-pipe, with the primary object of obviating the injurious local effects which are so frequently associated with the habit, and, secondly, as an adjunct to treatment by inhalation of volatile medicaments. We are unable to find space for a drawing of this improved form of pipe, but it is constructed in such wise as to remove the nicotine from, and to cool, the smoke on its way to the mouth. These objects are effected by a "radiator," which fits tightly on the under surface of the bowl, inside, and by an "accumulator," consisting of a bundle of prepared fibres, inserted into the tube-chamber comprised in the stem. Provided all the parts fit well together, we have a pipe which is singularly pleasant smoking, and divests the smoke of its acrid and injurious constituents. Unlike most pipes constructed on scientific principles, it is by no means unsightly in appearance, and does not exceed the usual dimensions. Refills are provided for both the radiator and the accumulator, so that the pipe remains practically unfouled. To use it as a therapeutic agent, the patient should be instructed to exhale the medicated smoke through the nose, by which act it is carried through the pharynx. Chloride of ammonium, tannic acid, salicylic acid, benzoic acid, and sulphur have all yielded satisfactory results. Another possible use of the pipe is that of an insufflator, for by taking out the accumulator, and charging either the radiator or the empty stem with the powder to be insufflated, and then without using tobacco, perform the act of smoking, the current set up will carry the powder well back into the fauces, the suction greatly facilitating this. The agents are Messrs. Woolley, chemists, of Manchester, and Sumners, chemists, of Liverpool, who have them, together with the requisite fittings.

Patents.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37, *Chancery Lane, London, E.C.*]

18,141. The "Alexander" bronchitis and croup steamer. THOMAS ALEXANDER, 79, Cowgate Street, Kirkintilloch, November 11th.

18,184. Improvements in dental or surgical engines. WILLIAM G. A. BONWILL, 45, Southampton Buildings, London, November 11th.

18,251. An improved hernia truss. ALFRED BUSH, 4, South Street, Finsbury, London, November 12th.

18,425. Improved truss pad. JOHN PITT BAYLY, 18, Fulham Place, Paddington (John Blume, United States), November 15th.

18,650. Improvements in thermal bandages. Wm. Phillips Thompson, 6, Lord Street, Liverpool, November 18th.

19,035. Improvements in dynamos for firing explosive charges or for medical purposes. Frank Wm. Dodd, 37, Walbrook, London, November 24th.

19,074. Improvements in the manufacture and production of medicinal compounds from ethereal oils. James Yate Johnson, 47, Lincoln's Inn Fields, London (F. von. Heyden Nachfolger, Germany), November 24th.

19,468. An improved uterine supporter. John Pitt Bayly, 18, Fulham Place, Paddington (Andrew Sherwood, U.S.A.), November 29th.

19,815. Improvements in the production of chlorine. Farnham Maxwell Lyte and Oscar Julian Steinhart, 53, Chancery Lane, London, Dec. 4th.

Specifications Published.

2,377. Ford. Trusses. 1890. 8d.

14,601. Lake (Dent). Suspensory bandages. 1890. 6d.

15,469. Imray (The Bethel Electric Medical Baths Company, Limited), administering electricity to the human body. 1890. 6d.

13,078. Stubbs. Artificial legs. 1889. 6d.

The above specifications may be had of Messrs. Rayner & Cassell, Patent Agents, 37, Chancery Lane, London, W.C., at the prices quoted.

[Should any of our readers desire to take out patents for inventions, either English or Foreign, and require advice upon the subject, the "Patent" Editor will be pleased to give them the benefit of his knowledge and experience. Communications addressed to the "Patent" Editor, *Medical Recorder*, 13, Waterloo Place, Regent St., S.W., will receive prompt attention.]

Miscellany.

North Grove Private Lunatic Asylum, Hawkhurst, Kent, was burned to the ground a few days since, and a lady patient, Miss Jeunnell, perished in the flames.

The Greenwich Hospital pension of £80 a year, for Deputy-Inspector General of Hospitals and Fleet, which recently became vacant by the death of Deputy-Inspector-General Robert M'Cormick, has been conferred on Inspector-General Charles M'Shane, M.D.

Dr. Henry Fitzgibbon, Surgeon to the City of Dublin and Lock Hospitals, Dublin, has been appointed Inspector of Lunatics under the Court of Chancery in Ireland. The office is paid by fees per visit, and is said to be worth about £70 a year. There was some smart competition for the post, and the appointment was announced by a curious coincidence, or rather with a curious indifference, just half an hour after the funeral of the late incumbent.

A New Remedy for Constipation.—Dr. Platau, of Berlin, suggests a remedy for inveterate constipation which, if it proves as satisfactory in other hands as it is claimed to have been in his own, will become a formidable rival of the popular treatment *à la glycerine*. It consists in the introduction of a pinch of powdered boracic acid into the rectum, preferably by insufflation, and the results are declared to be excellent, even in severe cases in which mechanical measures had signally failed to afford relief.

In giving iodine or the iodides internally for a considerable length of time, unpleasant symptoms often develop as a result, and it is a fact not generally known that these may be avoided by the daily administration of fifteen to twenty grains of sodium bicarbonate.

St. Bartholomew's Hospital.—Dr. Clement Godson has resigned his appointment of Assistant-Physician Accoucheur to St. Bartholomew's Hospital. Nothing further has transpired with reference to the appointment of a successor to the late Dr. Matthews Duncan, but Dr. Champneys is looked upon as a likely candidate.

The German doctors evidently intend to make the most of Dr. Koch's discovery. They already have their agents at work in this country touting for patients. Witness the following advertisement, cut from the columns of one of the leading daily newspapers:—"Dr. Koch's Cure. –A lady, a friend of the great Berlin doctor, experienced with Tuberculosis, will take four ladies to Berlin. Special advantages secured. Nurse attends. Doctors kindly notice."

Food for Infants.—Dr. Louis Starr recommends the following as the best substitute for the mother's milk in gradual weaning of a child, say at ten months; it may also be employed to supplant the breast when the mother's milk is insufficient:—Cream, f℥ss.; milk, f℥iiss.; sugar of milk, ℥ss.; water, f℥j. Should this quantity fail to satisfy the child, all the ingredients except the cream may be increased until the mixture measures six, eight or twelve ounces.

Palpitation of the Heart.—Dr. Nebo (*Journal de la Santé*) says that an excessive palpitation of the heart can always be arrested by bending double, with the head downward and the hands pendant, so as to produce a temporary congestion of the upper part of the body. In almost all cases of nervous or anæmic palpitation, the heart immediately resumes its natural function. If the respiratory movements be suspended during this action, the effect is only the more rapid.

A Clinique was recently opened in the *Rue de la Chaussée d'Antin*, Paris, for the hot-air treatment of consumptives. Here men, women, and children who have phthisis or are predisposed to it may be treated free of charge. Ranged around the walls of the establishment are a number of small tables, on each of which stands an apparatus for heating the air by means of a large spirit-lamp. From each of the reservoirs issues a rubber tube terminating in a mouthpiece, through which the patients inhale the heated air. The mouthpiece is double-valved, so that the expired air passes out without mingling with that delivered by the apparatus.

The Housing of the Working Classes Act of 1890 was considered by the Paddington Vestry at their meeting on the 18th inst., and it was resolved on the motion of Mr. C. A. Stephenson, seconded by Sir George Harris, L.C.C., to refer the matter, together with the whole question of the Housing of the Working Classes, to the Sanitary Committee with an instruction to consider specifically the following points:—(*a*) Single water supply-cistern uncovered and in proximity to w.c. or dust-bin. (*b*) Faulty connections with sewers. (*c*) Overcrowding. (*d*) Houses unfit for human habitation. (*e*) Committee on Housing of the Working Classes as provided by section 81 of the Act of 1890.

A Medical Monopolist.—The little island of Heligoland is an exceptional bit of territory in many respects, among others in this, that never in the recollection of the "oldest inhabitant" has it been the seat of professional jealousies. Why is it so favoured? Because only one medical man (dentist, surgeon, general practitioner, all in one) is to be found the length and breadth of the island. No sooner, however, had Germany taken possession of her new appendage than this delightful state of things seemed destined to come to an end. An announcement appeared in the *Heligoland Gazette* stating that a second German M.D. would shortly take up his residence in the island. Of course the Heligoland doctor was up in arms at once. He appealed to the new governor, quoting the Emperor William's dictum that the rights and privileges of the Heligolanders were to be respected and to remain unchanged "for the present," and the result is a decree leaving him in undisturbed possession of the sole right of practice in the island.

Small-pox in Lisbon.—The epidemic of small-pox at Lisbon shows no sign of abatement, and loud complaint is made by the medical press of the insufficient hospital accommodation provided for the sufferers. It is satisfactory, however, to learn that the Portuguese public are gradually waking up to the importance of vaccination and revaccination. The number of persons availing themselves of these means of protection is much larger than it was before the beginning of the present outbreak.

Land versus House Taxation.—In a paper read before the Sanitary Congress, Mr. S. M. Burroughs called attention to the effect of the taxation of house, as opposed to landed, property, in hindering the building of healthy, spacious, commodious houses. He points out that the more substantial the house, the more admirably and healthfully arranged its domestic and hygienic appliances, the greater will be the tax levied on the owner. He urged as a remedy that taxes should be levied on the land, and on the land alone, as the best means of promoting the building of healthy dwellings, and of ensuring the due utilisation of the land at our disposal.

The Study of Medicine in Thibet.—The Buddhist Lamas' University, in the Transbaikal Province of Thibet, has a medical course of ten years. According to *Nature*, a traveller named Ptitsyn has returned from that country with a collection of medical books and drugs illustrative of the knowledge and the methods of practice in Thibet. Mr. Ptitsyn remarks that he has found over one hundred diseases described in the Buddhist literature, and of these a mythical origin is ascribed to only two. Strictly medical subjects are not studied until the fifth year of the course, the first four years being devoted to the study of the languages and theology. The eighth year is devoted to astrology, and philosophy is studied in the last two years.

Insanity in Italy.—The number of lunatics in Italy on December 31st, 1888, is officially stated to have been 22,424, giving a proportion of 74·1 to every 100,000 of the population. The two sexes were affected in somewhat different proportions, there being 78·1 lunatics among every 100,000 men, and 70 among the same number of women. The incidence of the disease as regards age was chiefly between 41 and 60. Among 21,605 insane persons, there were 11,649 totally uneducated, 3,152 "of slight education," and only 6,804 who could read and write. Among the whole number of lunatics, there were only 652 idiots (chiefly cretins), and 1,285 who had been of weak mind since birth.

The Ten Commandments of Abdominal Surgery.—(1) The arrest of hæmorrhage. (2) The avoidance of mechanical irritation. (3) The guarding against infection. (4) The proper apposition of the edges of the wound. (5) The provision of necessary drainage. (6) To apply gentle pressure to prevent exudation. (7) To give perfect physiological rest. (8) To secure the best possible position of the parts to promote comfort and healing. (9) To provide for hygienic surroundings. (10) To attend to the patient's general health.—*Dr. Griffiths.*

Identity of Human and Animal Diphtheria.—M. Delthil presents the following conclusions:—All goes, therefore, to prove that the diphtheria of animals, whether coming from mammals or more especially from the ornithological race, is analogous to that of man, that it is transmissible from animal to man and *vice versâ*. It results, therefore, that we should carefully watch, in point of view of contagion, the animals of our stables and yards, as well as inspect the markets. This opinion is becoming more generally accepted day by day in France, in Germany, in Italy, and in Switzerland.—*La Médicine Moderne.*

Cold Bath in Malignant Measles.—In an abstract published in the *Therapeutic Gazette* for August, 1890, Drs. Dieulafoy, Renoy and Fereol are credited with employing and advising the frequent repetition of the cold bath, 78° to 70° and lower, in severe measles during the height of the eruption, with high temperature, rapid pulse, suppression of urine, and increasing pulmonary complication. Under this treatment the fine râles disappeared, diuresis was restored, the eruption and desquamation were promoted, and, with greatly reduced fever, all danger was averted.

Admission of Women to the Examination of the Sanitary Institute.—A lady having applied to be admitted to the examination of the Sanitary Institute, the Council have resolved to admit women to be examined. The progress of modern thought is entirely against disqualification by reason of sex. It is indeed the writer's opinion that the office of inspector of nuisances might in some places be undertaken by women; be this as it may, as the certificate of the institute simply states that the holder has sufficient knowledge of sanitary science to take such an office, there is certainly no reasonable objection to the admission of women.

Points in the Dietetic Management of Children.—Rachford formulates the following rules, which will aid us very much in selecting a diet when it becomes advisable to discontinue milk temporarily:—(1) Avoid albuminous food (*a*) when marked constitutional symptoms are present; (*b*) when in doubt as to the character of the fermentation causing the disease; (*c*) when the stools are putrid; (*d*) when the stools contain mucus and blood; (*e*) when the nausea is constant and not relieved by vomiting. (2) Avoid carbohydrates as a food (*a*) when there are no marked constitutional symptoms present, and the stools are continuously acid; (*b*) when there is much flatus, pain, or urticaria. (3) When the albumins are to be avoided, the carbohydrates are, as a rule, indicated; and when the carbohydrates are to be avoided, the albumins are, as a rule, indicated. (4) Give foods, such as cream, beef-broths, and whiskey (*a*) when the foods prescribed according to the above rules disagree; (*b*) during the first twenty-four hours in severe acute cases; (*c*) when in doubt as to the character of the food indicated.—*Archives of Pædiatrics*, 1890, p. 441.

STREET DISINFECTANTS.—The Bombay Municipality is contemplating an addition to its sanitary appliances in the shape of a portable disinfecting chamber for the city, which might be moved from street to street and house to house. This is a hint to Calcutta; but we can offer a better, simpler, and cheaper medium of ridding the streets of offensive odours from heaps of refuse or passing night-soil carts. Let a chatty of burning tar and sulphur be placed on each filth cart, or close to each receptacle for street refuse. The fumes which emanate will destroy the stench, and mixing with the air disinfect and purify it.

COCAINE IN OBSTETRIC PRACTICE.—Dr. Bousquet, of Marseilles, has used cocaine in thirty-two cases of midwifery, twenty-two of which were ordinary deliveries, the remaining ten necessitating the performance of version or the use of the forceps. In all these cases, five to ten minutes before the expulsion of the head or the undertaking of operative measures, he either inserted tampons charged with a cocaine solution into the vagina, or injected hypodermically of the same solution into each of the labia majora. He records that this practice was always attended with considerable success, in some instances suppressing the patient's suffering at this stage of labour, while all experienced a marked modification. He concludes that cocaine is an agent capable of rendering much service in obstetric practice, that it is efficacious and harmless, and may be used in almost all cases. In two cases in which he had tried antipyrin he found the drug useless for the purpose of relieving pain.—*Medical Record.*

SUBLIMATE POISONING.—A case is reported in a St. Petersburg medical journal of death resulting from an intra-uterine injection of corrosive sublimate solution. The patient went to the physician twelve days after labour. He found septic endometritis from retention of some portions of membrane, and irrigated the uterus with a sublimate solution (1 in 3,500). Patient had a child two hours afterwards, followed by fever and vomiting. During the night diarrhœa ensued, with colic and excessive vomiting. The abdomen became sensitive to pressure, the lochia serous and sparse. This condition persisted several days. Three days after the injection salivation was marked, the pharynx, gums and tonsils swollen and painful. Bismuth was given, together with cold milk and lime water, ice, pills and morphine. Potassium chlorate in solution was used as mouth wash. On the sixth day salivation had disappeared, but vomiting and diarrahœa returned. During the night she died suddenly. *Post-mortem* examination was not obtained.

THE Telegraph Department has of late been receiving more than its usual allowance of abuse, but it must be admitted that in the majority of instances the employés seem to have acted with a blunder-headed stupidity which would have disgraced a parochial official. The prompt delivery of a telegram is often a matter of life or death for the unfortunate patient on whose behalf it has been despatched, and as the department declines to be bound by the ordinary rules of commercial enterprise, it ought really to give the employés a gentle hint that they exist for the benefit of the public and not for the express purpose of thwarting their intentions. Mr. Christopher Heath was recently the victim of an instance of the kind referred to, and communicates his grievance to a contemporary. If one of the high and mighty officials who preside over the destinies of the department ever has to wait for Mr. Heath's services on account of a strangulated hernia while telegrams are being bandied about, he will be fortunate if he survives to recognise the necessity for more efficient control,

SIR MORELL MACKENZIE, an acknowledged authority on laryngeal cancer, recently imparted to his brethren of the "Laryngological and Rhinological Association" an item of practical information, which we communicate to our readers in the hope that it may come in handy just when something handy is a desideratum. The successful treatment of that alarming and dangerous condition, spasm of the glottis, is oftentimes difficult and uncertain, but Sir Morell tells us that by setting up a rival reflex, the laryngeal spasm, itself a reflex usually due to peripheral irritation, may be overcome *instanter*. All one has to do is to get the sufferer to take a pinch of snuff or pepper, or, failing either condiment, to excite sneezing by tickling the mucous membrane of the nares. The immediate result is a paroxysm of sneezing, after which the patient sinks quietly back to sleep, breathing like a new-born infant. The treatment is logical as well as practical, and as it is now made public for the first time, it is well worth a trial.

THERE are certain matters in which reform, however urgent, is indefinitely retarded on account of certain hindrances to free and open discussion of the topics. Such a one is the question of the hygiene of female underclothing, more particularly the garments from the waist downwards. Our contemporary, the London *New York Herald* knows no such reticences, the last number containing a thrilling article based on an interview with two ladies who, regardless of Mrs. Grundy, have constituted themselves apostles of knee-breeches for women. It must not be supposed, however, that they propose to flaunt the garment in the eyes of man, for they are intended to be quite confidential, being covered by the conventional skirt. Looking at the matter from a purely hygienic point of view, it cannot be doubted that women have much to gain by dispensing with all the heavy hangings which hamper their movements without affording a corresponding protection from the boreal blast. Hence a closely fitting garment of warm, woven material is vastly preferable to that actually in use. The reform, however, is not one that is best propagated by open-air meetings or flippant newspaper articles with woodcut illustrations. It requires very careful handling, and is also better fitted for medical than for profane journals.

MR. YELVERTON DAVENPORT, of Pimlico, whose name seems to be familiar to us in connection with police-court proceedings, has excited a good deal of interest and curiosity by his courage in giving into charge a woman who had asked him to get her "out of trouble," to use the technical phraseology. Mr. Davenport informed the magistrate at the Westminster Police Court that, though qualified by examination, he is not registered, an anomaly of which we would like to have some explanation, for if this gentleman is not on the *Register* it is difficult not to suspect that there may be some insuperable obstacle to his so being. This, however, is *en passant*, for it has no immediate bearing on the case in hand. We are disposed to admire Mr. Davenport for an act of moral courage which few medical men would be equal to. It cannot be doubted that were his conduct more generally followed, women would think twice before inciting medical men to violate the law. Recent stories from the States have put medical men on their guard against female journalists in search of sensational "copy," and it may be that Mr. Davenport had reason to suspect that he was being made the subject of a scheme to get him into a difficulty with the administrators of the law.

TYPHOID BACILLUS IN DRINKING-WATER.—Karlinski, in the *Archiv. für Hygiene*, has recently made some observations upon the life of the typhoid bacillus, under approximately normal conditions. For the experiments an old cistern with imperfect walls was chosen. The first observations after the addition of 1,900 cubic centimètres of the dejections of a typhoid patient showed an enormous number of germs containing some twelve different species, including some infusoria. On the third day all of the typhoid bacilli had disappeared. This observation was repeated several times, varying the amount of fæces that were added, but always with a like result. The cistern was then carefully cleaned and filled with pure spring water, in which the writer observed the typhoid bacilli twelve days after they had been added. An explanation for the rapid disappearance of the typhoid bacilli, the writer finds in the speedy development of a large saprophytic germ that destroys them.—*Journal of American Medical Association.*

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—PUBLIC HEALTH MEDICAL SERVICE.—The following resolution, in reference to the conditions upon which health appointments should be held, was passed by the Edinburgh College at its meeting on the 4th inst:—"That the Royal College of Physicians of Edinburgh, which has during the last two hundred years taken a deep interest in all matters connected with public health, and has for many years conferred a diploma in public health upon candidates who have undergone a special examination on the different branches of sanitary science, having taken into consideration the numerous appointments of medical officers of health made and to be made under the provisions of the recent Local Government Act, and being fully alive to the necessity of securing the satisfactory administration of the various Sanitary Acts, would venture to urge upon the Board of Supervision the importance of relieving all superintending county health medical officers, already appointed, from practice, and of appointing in the future only those who are free from practice, so that they may be enabled to devote their entire energies to the discharge of their special duties." Certified by G. A. Gibson, M.D., Secretary.—*Public Health.*

HEREDITARY INEBRIETY.—One of the most interesting duties of those who devote themselves to the thorough study of any subject must be that of tracing back the cause from the effect, and it needs but a little honest research into the history of inebriety to convince all who are interested in this disease that many of those suffering from it fall victims to an inborn craving for stimulants, unmistakeably inherited from past generations. It is curious to notice at how early an age, and in how many different ways, this craving is manifested. The writer has been brought constantly in contact with the children of inebriates, and have therefore had exceptional opportunities of watching the predisposition of this disease shown in many of them, sometimes by an unnatural taste for condiments and stimulating foods as well as drinks, and by a tendency to obtain these things by stealth if they are denied. He has also observed that when the mother only has been an inebriate the physical health of the offspring often suffers considerably, the nervous system being unequally balanced. Extreme restlessness and excitability, or, on the other hand, attacks of lethargy may be noticeable, while not unfrequently the child is liable to convulsions, weakness of digestion, &c. When the disease is only on the paternal side, the moral nature often seems of a very low type, or the brain powers wanting in force. In other cases the hereditary tendency remains long in abeyance, so much so that a suggestion of the possibility of its existence would be scouted, until some event (perhaps a great sorrow, shock, joy, or illness) happens, and the inherited propensity to indulge in alcohol is yielded to with, but too frequently, fatal results. It may be well to mention here some out of many cases, which came under notice, and which may possibly interest some who have not studied the question of "hereditary inebriety." An officer, who died from the effects of drink on his way home from India, left one child, a little girl, who was brought up by her mother as a teetotaler, but when just seventeen she acted as bridesmaid to a friend, and at the wedding breakfast was induced to take one glass of champagne to drink the bride's health. From that time the latent disease developed itself, the craving for stimulants steadily increased in spite of every effort to check its course, and she died at the age of twenty-one in delirium tremens. Another case was that of a gentleman, whose recollections of the life and death of his parents prevented him from taking any form of stimulant until after an accident which befell him, by which his nervous system received such a shock that it became necessary for him to consult a doctor, who advised him to take whisky and milk in the early morning as a kind of tonic. The patient explained why he had not been in the habit of taking alcohol, but the doctor still thought the prescribed remedy should be tried. It was taken, with the result that the gentleman soon found himself unable to struggle against the fierce thirst for stimulants which had been aroused, and died four years thereafter from inebrity. Another instance of the rapidity with which the disease develops when inherited is found in the following fact:—A gentleman, up to that time an abstainer, drank a glass or two of wine when over-excited and very anxious about the result of a race. The cause for his anxiety was soon removed, but he continued to seize every opportunity for drinking, frustrating in the most artful way his friends' efforts to stop him. On the fourth day, while under the influence of alcohol, he threw himself from a cliff into the sea. On enquiry it was ascertained that members of his family for some generations had suffered from inebriety. Certainly in a large percentage of the cases brought under the author's personal observation during the last twenty years, he has been able to trace hereditary tendency. Proportionately as the disease was found to descend from near relatives, or over any considerable length of time, so the cure became more difficult and less certain. The predisposition can, however, be taken from other than the nearest relations, or it may even pass a generation. When however, the chain is unbroken and closely connected, the brain of the sufferer often becomes curiously affected as soon as the smallest amount of alcohol is taken, most extraordinary dislikes are expressed, and distorted views of actions and life in general are imagined, and all self-control lost, so that the uninitiated would be tempted to consider the patient suffering from insanity rather than from inebriety.—*Proceedings of the Society for Study of Inebriety.*

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